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Antecedent Analysis

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Editors' Note: We hope you enjoy the following article on Antecedent Analysis. It is another installment in the continuing series of articles we plan on the topic of Behavioral Assessment and Functional Analysis. Let us know what you think.

Introduction

This article attempts to describe in more depth than previously described (e.g., LaVigna & Willis, 1995; Willis & LaVigna, 1996a; 1996b) the contribution of a thorough "antecedent analysis" as part of a Behavior Assessment and Functional Analysis. A complete antecedent analysis identifies two sets of antecedents, i.e., those events, conditions, situations and stimuli associated with a higher probability of problem behavior and those associated with a lower probability of problem behavior.

Occasionally, people use the term "precursors" interchangeably with the term "antecedents." In our work, we use those terms with reference to two very different things. "**Precursors**" refer to client behavior that is often (not necessarily always) displayed prior to "target behavior." Precursor behavior signals to us that the target behavior may soon occur. Importantly, when the precursor is observed it gives us an opportunity to respond in an attempt to prevent the occurrence of target behavior. In contrast, an "**antecedent**" is an environmental event, situation, condition, or stimulus which increases or decreases the likelihood of target behavior and/or its precursors.

Here is an example that may clarify the distinction between precursors and antecedents and how each might be used as part of a support plan. A person may display high rate, stereotypic arm flapping as a precursor to self-injurious behavior. Knowing this, if we see such arm flapping, we may be able to do something to prevent possible escalation to self-injurious behavior (e.g., Active Listening, help solve the problem). We may further determine through our behavioral assessment and functional analysis that criticism is an antecedent that makes self-injurious behavior and its precursor, (high rate, stereotypic arm flapping) more likely and that being verbally praised is an antecedent that makes self-injurious behavior and its precursor less likely to occur. Knowing this, of course, we may want to avoid criticism and provide ample verbal praise, even as we may be using positive programming (LaVigna, Willis & Donnellan, 1989) to teach this person how to cope

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Editors' Note...

For us, this is a very exciting issue of *Positive Practices*. Harry Guetherman from Montana wrote asking us to clarify the distinction between "chain interruption" and "stimulus change." We have wanted *Positive Practices* to provide a forum for give and take among people who are interested in advancing positive practices. "Letters to the Editors" seems like a good place for some of this to occur. After two years, it is nice that Harry has taken advantage of this virtually under utilized mechanism. We hope many more of you will do so in upcoming issues. Our "Letters to the Editors" column also has a communication from Celine Wooding in Australia telling us that she was successful in using *Positive Practices* to find a pen pal. Way to go Celine!

Gary W. LaVigna, PhD
Clinical Director

We are very sad to tell those of you who have not heard previously that Albert Kushlick passed away this past August. We are sure many of you were aware that Albert had battled serious heart problems for many years. In spite of this, his remarkable ability to think positively about his life and the exciting things that he was doing, both personally and professionally, and to minimize his thoughts about the things he couldn't do anything about, made him a remarkable man. Albert lived fully and with verve every day of his life. We are very fortunate that we could count him as one of our friends and as one from whom we learned much, both about life and about working in our field.

One of the highest compliments we have received was his interest in and adoption of our work at IABA in his own professional practice as a Psychiatrist in Great Britain. We were proud to publish an article written by him and his colleagues in the immediately preceding issue of *Positive Practices*. Albert's wife Dee told us that he was very pleased to receive his copy of the newsletter just three days before he went into the hospital that very last time.

Albert, we will miss you terribly. Thank you for your wisdom and your inspiration.

Gary W. LaVigna and
Thomas J. Willis, Co-editors

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Associate Director

Suzanne Wishes to Retire: A Case Example

Terence L. Belcher, Better Community Living, Inc., New Bedford, MA

Editors' Note: Terry Belcher attended our recent four day seminar in Boston. When he got back to the office he quickly mailed to us the following article. He felt it captured both the letter and the spirit of some of the things we said in Boston as to the effects of quality of life on behavior. After reading it, we couldn't agree more. We hope you enjoy it as much as we did.

An adequately supported, leisurely, and comfortable retirement at whatever age one chooses is the dream of many middle class Americans. People with learning difficulties quite often can anticipate neither a leisurely nor a comfortable retirement. Currently, retirement for a person with a learning difficulty usually involves simply a continuation of services for younger persons. Retirement activities frequently take place in settings such as segregated sheltered workshops, work activity programs, or day activity centers (Laken, Anderson, Hill, Bruininks, & Wright, 1991; Browder & Cooper, 1994). The call for a more "normal" retirement for people challenged by a developmental disability and more "normal" retirement activities is being made (Hawkins, 1993).

For two years Suzanne clearly stated her desire to do something other than work during the day. She did not like getting up early on weekdays. She loved seeing and interacting with animals; and she loved to go to Dunkin' Donuts for coffee. Suzanne is a 54 year old woman with a severe level of learning difficulty who spent 31 years in a state institution and then over five years in a segregated pre-vocational training program. She did not enjoy this day program and communicated her dissatisfaction by creating significant problems. Her discontent was expressed by screaming, work refusal, purposeful urination and defecation, self-abuse, aggression against others, and general tantruming on a regular basis.

Suzanne also displayed her displeasure with work at her small community based home with problems getting out of bed and ready for work in the morning. The process of getting ready to go to work each day was often long and disturbed. Suzanne would yell and scream that she did not want to go to work; she wanted to stay home. She would also hit people, throw objects, destroy property, purposefully urinate and defecate, and generally create chaos to voice her displeasure at going to work.

Of Suzanne's difficult behaviors at home 25% occurred in the morning as she was getting ready to go to work. At her sheltered workshop Suzanne acted in the same manner. For 13 consecutive months at home and work Suzanne averaged 22.2 behavioral episodes per month.

The manager of the home where Suzanne lived decided to approach her residential agency with the idea of Suzanne retiring from the sheltered workshop. The manager reasoned that Suzanne's communication of her wishes should be listened to. The manager had listened and understood that retirement would improve Suzanne's life satisfaction. The idea of retirement was warmly received until the question of funding arose. The State Department of Mental Retardation could not allocate funds for Suzanne's retirement. Money was just too scarce. The executive director of Suzanne's residential agency studied the issue and decided that the agency alone would fund Suzanne's retirement, if that would make her life better.

On September 25, 1995 Suzanne officially retired from her pre-vocational training program. Suzanne's residential agency made arrangements for a staff person to support Suzanne's new activities as well as provided a car for her use. It took Suzanne approximately one month to fully comprehend that she did not have to go to work anymore. She was retired.

Suzanne began to smile. She could now sleep till 9 or 10 AM every day. She could do things she liked to do. She volunteered at the local animal shelter. She started talking more often and more spontaneously. She bought more CD's of her favorite classical music to listen to. And, she could go to Dunkin' Donuts for coffee whenever she wished. Her behavioral episodes decreased by 89% after six months of retirement (from 22.23 per month to 2.50 per month).

An adequately supported individualized retirement for people challenged by a developmental disability is a concept that is beginning to gather serious notice and consideration (Browder & Cooper, 1994). Funding sources need to become involved more sincerely in planning for and implementation of these services. We should not allow retirement services for people with learning difficulties to become "retirement programs" in the same fashion as supported employment became sheltered workshops. Suzanne speaks of the need for a person centered individualized retirement similar to that envisioned, planned, and often achieved by the average American citizen.

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with and tolerate the kind of criticism he may get in the real world, without engaging in self-injurious behavior and, perhaps, its precursors.

As environmental occurrences, antecedents are more than events in the external environment. Antecedents may originate in the external environment, in the internal or organic environment, and/or in the mental environment. Antecedents that originate in the person's *external environment* usually can be seen, heard, felt or smelled by others. An observer can experience these events through their own senses. For example, for a given person, criticism, being pressured to perform a nonpreferred activity, and being touched may be antecedents in the presence of which certain behaviors have a higher probability of occurring (i.e., high probability antecedents). On the other hand, being verbally praised, engaging in a highly preferred activity, and being with a particular person, may be antecedents in the presence of which the same behaviors have a lower probability of occurring (i.e., low probability antecedents).

Antecedents may also originate in the person's *internal or organic environment.* These are not so easily determined by others. They may be reported by the person; may be inferred from the way the person presents himself at the time of the incident; or may be inferred or extrapolated from available medical or other records. For example, a hay fever episode and being hungry may be internal antecedents in the presence of which certain behaviors (e.g., physical assault) have a higher probability of occurring, while feeling well rested, feeling well and feeling full, may be internal antecedents in the presence of which certain behaviors (e.g., physical assault) have a lower probability of occurring.

Finally, antecedents may originate in the person's *cognitive or mental environment.* Thoughts of being persecuted, delusional thoughts (i.e., those associated with mental illness or even certain internalized rules (such as "physically confront and challenge anybody who has insulted your mother"), may be high probability antecedents and being confident in ones abilities, reminding yourself about the goals you are working on, or certain other rules (such as "sticks and stones may break my bones, but names will never hurt me"), may be low probability antecedents in the *mental environment.*

The antecedents that control the higher or lower likelihood of behavior can occur singly or in combination. In most instances, all three environments interact to determine whether a behavior will occur or not. How you behave now or tomorrow is likely to depend on how you feel at the moment (i.e., internal environment), what you believe (i.e., cognitive/mental environment), and the conditions that are present at the time (i.e., external environment). In addition, the antecedents that control our behavior do not always occur "immediately before the behavior." They can vary in terms of their proximity to the target behavior and/or its precursors or to the absence of these behaviors. This leads us to a discussion of a special class of antecedents known as "setting events."

"Setting events" are antecedents that can occur considerably earlier in time, perhaps hours, days, weeks, months or even years earlier, that have an impact on a person's behavior. Bijou and Baer (1961) illustrated the role of setting events and their effect on everyday behavior in the following example. "One mother, who routinely puts her eighteen-month-

old son in a playpen after his afternoon nap, has found that during the next hour, the baby will play with his toys, try some gymnastics on the side of the pen, and engage in vigorous vocal play - but will not fuss (and so mother has free time for an extra cup of coffee and a few telephone calls). However, one day the baby is kept awake during his entire nap time by the unusual and persistent noise of a power mower on the lawn outside his bedroom window. When his mother puts him in the playpen this time, he whimpers, cries, is generally fussy, and does not play" (Bijou & Baer, 1961, p. 21). In this instance, the failure of the child to get his nap (i.e., he is tired) is a setting event that affects his behavior later when he is placed in the crib, as mother usually does. Also recognize that having the nap earlier is a setting event that affects his behavior quite differently when he is later placed in the playpen.

Bijou and Baer (1961) go on to describe a number of other "setting events" that can influence behavior, including "…changes in the usual sleep cycle or eating cycle; changes in the organism following injury, disease, surgery, or drugs; and any relatively prolonged deprivation of social contact, or, similarly, any current satiation of such stimuli. A setting event of particular significance is the use of verbal instructions, such as telling a child 'now be a good boy' or 'Santa won't bring you any toys unless you behave yourself.' These setting events may change his behavior for some time afterwards, especially in that the proportion of 'good' behaviors increases and that of 'bad' behaviors decreases" (Bijou & Baer, 1961, p. 22).

People sometimes have difficulty distinguishing "setting events" from immediate antecedents or, as they are frequently termed, "triggers." While "setting events" may occur some distance in time before the behavior, the "trigger" has immediate proximity to the behavior or its absence. In other words, we can say that a "setting event" sensitizes the person to the "triggers" that occur in their environment; or predisposes them to act in a certain way in the presence of those triggers. For example, have you ever been in a bad mood? Isn't it true that whether you give your kids money upon request is partially dependent on your "mood." In a bad mood, you may be likely to ask them to justify the need, or you may simply say "no." In contrast, given you are in a good or even euphoric mood, the same request may result in you saying "Sure! Here is $10 extra and the keys to my new car." In this scenario, the mood is a "setting event," while the request for money is the immediate "trigger." Table 1 further attempts to illustrate the differences between "setting events" and immediate "triggers."

Setting events and triggers rarely act as isolated events to influence behavior. Rather, some mix of setting events and triggers typically combine to influence the

Antecedent Analysis

Examples of Antecedents That Might Increase the Likelihood of Challenging Behavior	Examples of Antecedents That Might Decrease the Likelihood of Challenging Behavior
Setting Events:	**Setting Events:**
1. **Organic Environment:** Having a headache and/or being tired. Neurologically based poor impulse control.	1. **Organic Environment:** Being well rested and full after eating dinner.
2. **External Environment:** Boredom and lack of interesting activities; a low density of noncontingent reinforcement.	2. **External Environment:** Having a schedule of interesting activities in which to engage; a high density of noncontingent reinforcement.
3. **Mental Environment:** Belief that short people are not as important or as good as other people and seeing oneself as a short person.	3. **Mental Environment:** Believing that "sticks and stones may break my bones but names will never hurt me."
Triggers:	**Triggers:**
1. **Organic Environment:** A sudden onset of an extreme migraine headache or the pain of hitting oneself on the thumb with a hammer or of getting one's hand caught in a door.	1. **Organic Environment:** Turing a fan on to cool down and/or having a cold drink when it is hot and humid.
2. **External Environment:** Being criticized and/or having to wait for something.	2. **External Environment:** Being complemented and/or being invited to go for a ride to get an ice cream cone.
3. **Mental Environment:** Concluding that you just made a bad mistake or just made a fool of yourself.	3. **Mental Environment:** Mentally reminding oneself to "do unto others as you would have them do unto you."

Table 1- Examples of Setting Events and Triggers

probability of behavior. Sometimes this combined effect may be an interactive effect. For example, a high probability setting event might be feeling sick and feverish and a trigger may be criticism. Feeling sick might not be sufficient to increase the probability of problem behavior by itself, nor might not criticism. However, when they are both present, these two antecedents might *interact* and combine together to increase the probability of target behavior and its precursors. At other times, this combined effect may be an additive effect. For example, consider the following: dinner has burned, the person we usually eat with has dinner plans elsewhere, our favorite TV show has been preempted for a political speech, its raining out and the newly planted flower bed is being washed away, and the roof is leaking. It may be that any one, two or even three of these five potential triggers will *not* increase the likelihood of target behavior. However, *any* four may *add* and combine together to increase the probability of problem behavior. The concept here is that there may be a "straw that breaks the camel's back."

Finally, an antecedent analysis recognizes that the interaction between an antecedent and target behavior isn't only in one direction. That is, antecedents (as environmental events) and behaviors can interact back and forth to influence the course of the behavior (Willis & LaVigna, 1996b). For example, a complex set of antecedents may "trigger" precursor behavior. If staff react one way to precursor behavior, this may increase the likelihood of target behavior, but if they react in yet another way, this may decrease the likelihood of target behavior. Let us illustrate this with a hypothetical example. Suppose you know that a person's aggression has the typical precursor of verbalized profanity. Suppose you know further that if staff respond to verbal profanity with a verbal reprimand it increases the likelihood of target behavior but if they respond with active listening (Gordon, 1970), the likelihood of aggression is sharply reduced. This might suggest the utilization of active listening vs. verbal reprimands as part of this person's support plan. If verbal profanity is of sufficient concern, strategies other than verbal reprimands can be employed.

As described above, the goal of an antecedent analysis is to identify those antecedents which make target behavior and its precursors more likely and less likely **and** to identify those antecedents that are *more* likely to *escalate* precursor behavior to target behavior and those that are *less* likely to *escalate* precursor behavior to target behavior and thus resolve the situation without the occurrence of target behavior. But antecedent analysis does not stop at the occurrence. Rather, antecedent analysis continues to be important even after the target behavior occurs. Specifically, the reactions that people have to the problem behavior can make it worse, can improve it, or can have no effect at all. Thus, one purpose of the antecedent analysis is to identify those reactions and interactions of others that (1) *increase* the likelihood that the episode continues and/or escalates; and (2) *decrease* the likelihood that the episode continues and/or escalates thus increasing the likelihood that the episode stops and/or de-escalates.

For example, you may learn that if staff respond to a person's aggression by trying to physically control the person, this escalates the episode and makes injury more likely to occur. In contrast, you may also have learned that if staff simply turn and walk away, the person will not attempt to chase and hit them and the episode will subside. Given this antecedent analysis, our reactive strategy might very well include "turning and walking away" with very clear instructions to staff not to "physically attempt to control" the person. If we are concerned about reinforcing this behavior with this counter-intuitive strategy and fear inadvertently creating a counter-therapeutic effect, we can address this concern in our proactive plan (LaVigna & Willis, 1997).

To summarize, the role of an antecedent analysis includes the identification of those environmental events that: 1) increase the likelihood that target behavior and its precursors will occur; 2) decrease the likelihood that target behavior and its precursors will occur; 3) increase the likelihood that precursor behavior will escalate to target behavior; 4) decrease the likelihood that precursor behavior will escalate to target behavior; 5) increase the likelihood that target behavior will continue and/or escalate; and 6) decrease the likelihood that target behavior will continue and/or escalate.

Methods of Antecedent Analysis

Antecedent analysis may not be simple; it can be quite involved. Indeed, without a proper understanding of what information needs to be gathered and the methods used to gather the information, an antecedent analysis could yield very little that is truly useful. In this section, we describe a number of methods that can be helpful in gathering information for the purpose of identifying both the high probability and the low probability antecedents. These methods include a variety of data collection strategies, interview techniques, records review, and observations of and interactions with the person.

Before we begin, we would like

to articulate the difference between an information gathering question and a question that yields conclusions. We find that the distinction is not always clear when carrying out an assessment. Table 2 illustrates the two types of questions.

Information gathering questions are designed to elicit facts on the basis of which we can draw conclusions. In contrast, conclusionary questions ask people being interviewed to "infer" from their experiences. The information gathered with these conclusionary questions may not be useful or provide valid answers. We think it will be helpful for you to keep the distinction between information gathering questions and conclusionary questions in mind as you consider the following methods we describe for carrying out an antecedent analysis.

Data Collection Strategies. Perhaps one of the most utilized methods of data collection to assist in a functional analysis of behavior is the well known *A-B-C method of data collection*. In this approach, staff are instructed to record the Antecedents (A), Behavior (B) and Consequence (C) for every occurrence of a target response. The idea is that the patterns of A-B-C's that emerge can help to identify the antecedents, consequences and functions of the behavior.

As typically used, however, we find this method inherently limited. For one thing, it is usually structured to identify the high probability antecedents only. This limitation occurs since staff are usually only asked to describe the antecedents for an actual occurrence of target behavior. If anything, these are more likely to be the antecedents associated with the higher rather than the lower probabilities of the behavior. This is not to say that this method could not be used as an aide in identifying the low probability antecedents. It, however, would be necessary for staff to describe what is happening at periodic times throughout the day when the behavior is not occurring. We have seen such information gathering around the non-occurrence of problem behavior very, very rarely.

The A-B-C method has a second limitation, even if it is used solely to identify higher probability antecedents. The A-B-C method of data collection is usually recommended as an *Information Gathering Tool* to help answer *Conclusionary Questions.* Unfortunately, those using the A-B-C method often understand the task itself as a conclusionary one; in other words; they put the cart before the horse. When they are filling out an A-B-C sheet they write in the "A" box what they *think the trigger is*, rather than write their description of *what was happening just prior to the occurrence of the target behavior*. This is probably why we all to often see the statement "no apparent antecedent" in the "A" box. What they mean is "no apparent *trigger*." However, we may only be able to figure out what the triggers are after we have collected a lot of information about what happens prior to target behavior occurrence and what tends to be happening when target behavior is absent.

For example, we recently had a chance to review an A-B-C sheet filled out by staff who were supporting an adolescent boy who would frequently dash out into the road, apparently being oblivious to oncoming traffic. This "dashing" was the target behavior. They indicated on the A-B-C sheet that "there were no known antecedents." In talking to us, they said that they (i.e., two staff) were simply walking down the street (meaning the sidewalk) with David (his fictitious name) and he dashed into the road without warning. In discussing this event with them, we agreed that they may not have been able to figure out what "triggered" the behavior. However, in our discussion we concluded that it might be helpful if we simply

Sample Information Gathering Questions	Sample Conclusionary Questions
1. What was he doing just prior to engaging in the target behavior?	1. What antecedents make this behavior more or less likely to occur?
2. Who had asked him to do that?	2. Where is this behavior most likely to occur?
3. How was the request made, e.g., what tone of voice was used; was it authoritarian and/or parental in tone or was it egalitarian in tone, as you would use with a peer of whom you were making a request?	3. During what activities is this behavior least likely to occur?
4. You said that last Saturday he did not exhibit any of these target behaviors. How had he spent that day?	4. With whom is this behavior least likely to occur.
5. Who was his support staff last Saturday?	

Table 2 - A Comparison of Information Gathering and Conclusionary Questions

described the events, conditions, situations and stimuli present just prior to the behavior. We suggested that after we gathered information such as this for a number of events, we might *then* be able to determine the trigger. The following are examples of the information that could have been placed on the A-B-C sheet in the "A" column: 1) Where they were coming from; 2) Where they were going to; 3) Had this been explained to David; 4) Was this a destination of his choosing or of his liking; 5) Who was with him; 6) Who had talked to David last; 7) What had been said; 8) What was on the other side of the street; etc.

Further, we discussed that it could be very revealing to ask these sorts of questions for those times he goes for a walk and does not dash into the street. If we gathered such information, we might then be able to identify some antecedents associated with both the higher likelihood and the lower likelihood of the target behavior.

To help the staff who are doing A-B-C data collection, remember that we are asking for *information* rather than for *conclusions*, we sometimes provide a more specific list of questions to prompt the information we are seeking. For example, the "A" box would ask for a list of the people present; the time of the occurrence; the setting in which the behavior occurred; the activity at the time of occurrence; the events immediately preceding each occurrence, including the closest verbatim record possible of the conversation leading up to the event, along with an assessment of the tone of the conversation; immediate changes in physical proximity; etc. We might also ask staff to record this kind of information on a regularly scheduled basis even when the behavior has not occurred, in order to contribute to an identification of the low probability antecedents.

In some cases, we have used rather complex A-B-C formats that involve staff using a combination of codes, words, fill-in the blanks and moment-by-moment narrative; all for the purpose of identifying the antecedents that control behavior. The data collection sheet shown in Table 3 illustrates this.

In this approach, the data sheet is laid out in such a way that the antecedents to an episode of target behavior or the antecedents that exist at times during which target behavior has not occurred can be entered by staff using predetermined codes. For example, in Table 3, under "Place/Location Code," "a" may represent the living room and "b" the kitchen. In

GENERAL INFORMATION	MOMENT-BY-MOMENT EVENT DESCRIPTION RECORD	
Date: _____ Focus Person: _____ Staff: _____ Start Time: _____ Stop Time: _____	**Staff/Others** What They Did/What They Said	**Focus Person** What They Did/ What They Said
Place/Location Code: a) b) c) d) e) f) Other	A	B
People Present Code: a) b) c) d) e) f) Other	A Then	B Then
Activity Code: a) b) c) d) e) f) Other	Then	Then
Verbatim description of 2 minutes leading up to event:	Then	Then
General comments describing how day has been:	Then	Then
Other:		

Table 3 - Sample A-B-C Data Collection Sheet

the data sheet under "People Present Code," "a" may represent mother, "b" father, and "c" sister. We can use this approach when there are certain antecedents that we believe may influence the likelihood of the behavior or its non-occurrence.

The data sheet shown in Table 3 gives staff a place to describe "events" leading up to the incident. This is a period during which we might expect "triggers" to appear. It also gives staff a place to describe the "sequential" actions that may occur between the focus person and others. In the second column staff would begin by describing what they did and said as the episode unfolded (A). They would then describe what the focus person did and said (B). They would then describe what they (staff) did and said (C), etc. This sequential description would continue until the entire episode has been presented.

As this information is collected, it can be summarized on a monthly or quarterly basis to visually reveal the high probability and low probability antecedents. Such a summary graph would show frequency on the vertical axis and coded antecedent category on the horizontal axis. For example, it may show that the behavior happened 30 times last quarter when he was with one particular staff person but only two times when he was with another.

How frequently staff are asked to fill out such A-B-C sheets needs to be sensitive to the staff resources available. Keep in mind that it may take several minutes to complete an A-B-C entry for each event. Therefore, it would probably be unrealistic to ask people to complete an A-B-C entry for a behavior that occurs at a relatively high rate behavior. (Staff would probably spend more time recording than being with the person they are serving.) With high-rate behaviors, chances are we would not ask staff to fill out a sheet for every occurrence. Rather, depending on the situation, we might ask staff to complete an A-B-C for the first event of the day, or the first event each hour, or the first event following a randomly selected time of day, or each hour on the hour, whether or not the behavior has occurred, etc.

Finally, it is important to remember that A-B-C recording strategies were never meant to be used as a primary *data collection* strategy for purposes of program evaluation. They simply require too many resources. Rather, A-B-C recording strategies are meant to be used for *analysis*; to help determine the antecedents that control higher and lower probabilities of the behavior during a Functional Analysis, and to help determine the *functions served by behavior.* Once an assessment has been completed, A-B-C recording strategies are meant to be used to identify changes that may have occurred in the antecedents that control behavior and possible changes in the functions of the behavior. For the purposes of ongoing data collection other strategies should be used (e.g., event, interval sampling, etc.).

Scatter graph analysis (Touchette, MacDonald & Langer, 1985) is yet another form of data collection that can be enormously helpful in antecedent analysis. Using this approach, behavioral episodes are plotted on a graph which has the hours of the day on the vertical axis and the days of the week on the horizontal axis. When data are plotted in this way, patterns can sometimes be seen that show the times of day and the days of the week associated with the higher and lower likelihoods of the target behavior. This information can be further examined by comparing the times and days during which the behaviors have a higher or lower likelihood with activity schedules, work schedules, staff schedules, etc. Such comparisons may help identify activities or events and staff present during periods of higher and lower likelihood.

For example, we were providing consultation in a group home in which one of the adult men living there would loudly yell and cry for long periods of time. In carrying out a scatter graph analysis, we discovered that these behaviors were happening almost exclusively Mondays through Fridays, between the hours of 3:30 PM, when he returned home from his day service, and 6:30 PM, when dinner was typically served. This suggested the hypothesis that his "problem behavior" was simply his way of expressing his hunger. Given this hypothesis, the proposed solution included, among other things, teaching him how to prepare his own snack, independently (without requiring staff prompting, presence or participation); having snacks out and available through out the day that did not require preparation (e.g., having a fruit bowl available); and teaching him how to express his hunger and request something to eat (especially for those occasions when he was out in the community or in somebody else's home).

Interview Techniques. Interviewing represents another very important information gathering tool when it comes to Antecedent Analysis. In addition to the focus person, we attempt to interview people who live and work with the person day in and day out, including parents, siblings, friends, group home operators and staff, community support staff, etc. As the person who is carrying out the assessment, we may know the person only through the assessment process. Except in unusual situations, it is unlikely that we will have information needed to complete an assessment. If the critical information is to be had, it will be provided by those who know the

focus person most intimately.

Our *Behavior Assessment Guide* (Willis, LaVigna & Donnellan, 1993) is a tool that provides what we call door opening questions (Willis & LaVigna, 1996a) for gathering the needed information. However, sometimes the door doesn't seem to open much at all. For example, if we ask with whom is the behavior most likely to occur, the answer is "everybody;" if we ask "*Where*?", the answer is "everywhere;" and if we ask "*When*?"" the response is usually "anytime, all the time," etc. These "door opening" questions then need to be followed up with more specific, probing questioning.

...we are trying to evoke the image of Columbo and remind people that they have to be detectives in carrying out an antecedent analysis.

In our lectures, we sometimes joke that the two items necessary to do a good antecedent analysis is an old, torn and tattered trench coat and a half smoked cigar. Of course, in doing this we are trying to evoke the image of Columbo and remind people that they have to be detectives in carrying out an antecedent analysis. In fact, as Columbo often finds that the direct question doesn't always produce the most useful information, we also find that the indirect method often works. One favorite and surprisingly productive question we ask is what we call the "million dollar question." After staff have told us that the behavior essentially occurs everywhere, with everyone, all the time, we ask:

"Ma'am, just one more thing." (Columbo at work.) *"If we could offer a million dollars if you got through the afternoon without any occurrences of target behavior, what would you do to maximize your chances of earning the million?"*

At this point, staff usually say something like "there is nothing I can do to guarantee the behavior won't occur." "But" we say, "you have nothing to lose. You may not be able to guarantee it, even so, what could you do to at least give yourself the best chance possible. For a million dollars, certainly you would try your hardest. Anything goes. What would you do?" Invariably, staff will then take a stab at it and say what they think they could do to minimize the occurrence of target behavior. For example, they would say "...well, I guess I would put him in the hot tub with Mary Jane, give him pizza to eat and play country and western music on the stereo."

In one fell swoop we have identified certain antecedents associated with the lower probability of target behavior, i.e., being in water, being with Mary Jane, eating pizza, and listening to certain kinds of music. Of course we could follow-up with the obvious by asking staff: "To earn a second million, what would you do to make the target behavior occur?" This might have them saying something like "...I would have James work with him, I would tell him he wasn't going to see his mother that weekend, I would delay dinner, and I would tell him he had to rake the yard." In this way we could identify certain antecedents associated with the higher probability of target behavior.

These are just door opening questions of course. We would follow up with quite a number of other questions. For example, we would want to know a lot more about Mary Jane's and James' physical characteristics and interpersonal styles, their attitudes and expectations when working with the focus person, etc. We would want to probe specifically to see how readily staff could identify occasions when behavior occurred in contradiction with the suggested antecedent control. For example, we might ask the last time target behavior occurred in the presence of Mary Jane or when country and western music was playing. If such occasions can't be recalled, it suggests very strong antecedent control. If such occasions can be recalled, their relative rarity may still indicate a significant degree of antecedent control, although a significant number of occasions may suggest that the antecedent control isn't so obvious, which would require us to ask a number of other questions to find out why the staff would place their bet on Mary Jane and country and western music.

In addition to this *Columbonian* method of interviewing, we have discovered another approach that is surprisingly revealing in an antecedent analysis. In contrast to asking the reporter to characterize situations in general, we ask them to describe specific incidents in concrete terms. What we ask for is a second-by-second, frame-by-frame description. As an example, we recently were performing an assessment for Andrew, a young man in his early twenties, who had been described as being aggressive. The following is the gist of that part of the staff interview we carried out in which we asked staff to describe a concrete event.

Question: When did Andrew's aggression last occur?

Answer: Last night when I asked him to set the table.

Question: Can you describe the

events leading up to this behavior?

Answer: I asked him to set the table and he just hit me.

This pattern of questions and answers is very typical but not very revealing as to the possible antecedents. At best, we would end up with "task avoidance" as our understanding of the meaning of the behavior. Look, however, at the different understanding that unfolds as we continue to guide staff from a very general characterization of the incident to a frame-by-frame, concrete description.

Question: Think hard, to the best of your recollection, how long was it, that is, how many seconds went by between your asking Andrew to set the table and when he tried to hit you?

Answer: (Pause) About two minutes.

Question: So as you have thought about it, it was about 2-minutes, that is 120 seconds between your request and Andrew's attempt to hit you. That's actually quite a long time. It might be really helpful if we could have a very concrete description of what exactly happened during that time. To start with, where were you when you made the request?

Answer: By the dining room table.

Question: Where was Andrew and how far away was he?

Answer: He was sitting in the living room, about 12 feet away.

Question: What was he doing?

Answer: He was looking at a magazine.

Question: What exactly did you say to him?

Answer: I told him it was time to set the table.

Question: Try not to characterize what you said. Tell me verbatim what you said. In fact, let's do a little role play. Pretend I'm Andrew. Say to me exactly what you said to him, using the same volume and tone of voice that you used then. OK, shoot.

Answer: Andrew, come here, it's time to set the table for dinner! (Said fairly loudly, in a stern, parental tone of voice.)

Question: Then what happened?

Answer: Nothing. He ignored me and kept reading his magazine?

Question: Then what happened? What did you say?

Answer: I said-Andrew put the magazine down and come here.

Question: Then what happened?

Answer: He ignored me again.

Question: Then what did you say?

Answer: I said-Andrew, this morning when we were choosing chores, you said you would set the table. It's time now. Come on!

Question: Then what happened?

Answer: I said-Andrew, if you don't set the table, we won't be able to eat. Come on, we're all counting on you.

Question: Then what happened?

Answer: Since he was still ignoring me, I went up next to him and asked him again.

Question: Try not to characterize what happened. Describe what happened in concrete terms. Tell me verbatim what you said.

Answer: I said put the magazine down and come with me.

Question: Then what happened?

Answer: He put the magazine down, stood up and started walking away from me.

Question: And then…

Answer: I went after him.

Question: And then…

Answer: I caught up with him and took his arm to prompt him to go into the dining room.

Question: And then…

Answer: He turned and hit me.

From this interview we get a much different picture of possible controlling antecedents to Andrew's aggression. Our hypotheses might include that authoritarian control, "nagging," activity interruption, and *physical* guidance, as well as pressure to perform a nonpreferred task, set the occasion for the higher probability of aggression, while autonomy, self scheduling, and respectful and well timed verbal reminders may set the occasion for the lower probability of aggression. These hypotheses can be tested against additional frame by frame analyses of other specific events of aggression as well as specific occasions when aggression did not occur when Andrew was asked to set the table and in fact did the task as requested.

In addition to the insight that such frame by frame descriptions of specific incidents can reveal, interviewing also allows us to go deeper into an event in an effort to identify the relevant antecedents. For example, we may learn that when the focus person is engaged in a particular activity, the target behavior is more likely to occur and when they are engaged in yet another activity, the behavior is less likely to occur. If true, we have identified antecedents that can help us. For example, scheduling the second activity and not scheduling the first should produce an immediate decrease in target behavior.

However, we may find it even more helpful to go deeper with our antecedent analysis. Specifically, in this case it might be helpful to know the nature of the activities. For example, does one require large motor activity and the other small motor activity; does one take place inside and the other outside; do staff usually select one and the focus person the other; does one tend to take place right after dinner and the other just before (or at other typical times during the day); is one a group activity and the other an individual activity; is one regularly scheduled and the other only sporadically scheduled; etc.? Know-

ing the differences in the characteristics of these activities, how they are selected, etc., may provide a *deeper* understanding of the controlling antecedents. If we gather this kind of information, we may be able to identify which characteristics of activities, not just which concrete activities, set the occasion for the higher and lower likelihood's of target behavior.

In addition to data collection and interview techniques, an antecedent analysis requires a thorough records review.

Yet another interview technique is to explore with staff and parents their impressions concerning the higher and lower likelihood's of target behavior under those conditions that would make it more or less likely for most people to *act up*. For example, we could ask whether we would be more likely to see target behavior in the face of naturally occurring aversive events such as delay in gratification (i.e., having to wait for something), denial (i.e., not getting something), criticism, failure, frustration, boredom, physical discomfort and the need to perform nonpreferred activities. We could also ask whether we would be less likely to see target behavior during a favorite meal, while engaged in a favorite activity, while with a favorite person, etc.

When asking questions such as these, we would not leave staff or parent responses at the door opening level. For example, if staff said that the target behavior is more likely to occur in response to criticism, we might ask if they could remember when that last happened. Such recollection might also be subject to the kind of frame by frame dissection that we illustrated above. Similarly, if they were to say that the target behavior rarely occurs when the focus person is with a particular staff person, we might ask if they could recall any exceptions to this or how long had it been since the behavior occurred in the presence of that staff person.

Such illustrative examples will not only act to confirm the developing antecedent analysis but will also support the conclusions that are reached and make the findings of the analysis more credible to the people providing the information. In fact, this is one of the reasons that interviewing is so valuable to the assessment and analysis process. Not only are we able to gather information that we have not been able to gather by other means and/or to confirm the information gathered from these other sources, we are also laying the ground work for the credibility of our findings and the buy-in we will need from staff and parents if our recommendations are to be adopted.

Records Review. In addition to data collection and interview techniques, an antecedent analysis requires a thorough records review. It can be quite revealing to read progress reports, nursing notes, previous assessment reports and evaluations, data summaries, special incident reports, etc. We have learned that we can't anticipate where we will find useful information, so we look at it all.

For example, we once carried out an assessment for a person who had been referred to us for aggression. The staff insisted that the behavior "came out of the blue." However, they had carefully recorded each incident in a "special incident report." In reading those reports, two different situations seemed to emerge as possible antecedents. One was that aggression would sometimes occur when the person was waiting for something to happen; the other was when one of his *rituals* was interrupted. These events were *not* noted for each of the incidents but for enough of them to warrant further interview exploration with staff. With further interviewing, we were able to confirm that delay in gratification and ritual interruption were the major antecedents for aggression. The reason these had been so hard for staff to see was that the aggression didn't always follow these events, nor did aggression, when it did occur, always occur immediately.

In another example, in one of our longitudinal training courses, one of our trainees was assigned a focus person whose referral problem was described as "operant vomiting." In going through the records, she discovered that the focus person had been referred three times in the past year for suspected gastrointestinal problems. Each time, the results were negative, indicating that no gastrointestinal problems existed. However, in the mode of *information gathering*, our trainee read each of the medical reports and got the impression that the exams that had been carried out were cursory in nature. During the interview part of the assessment, she further discovered that the so-called "operant" vomiting occurred only during meal time, regardless of the frustrations, delays or other provocation's she experienced during other times of the day. In addition, "operant vomiting" did not occur with pureed foods or fluids.

Suspecting that there might indeed be a physical explanation for the behavior, she pushed real hard for a full and thorough gastrointestinal exam. Sure enough, the findings were that there was a problem with the esophagus at the

point of entry into the stomach. Specifically, the opening into the stomach was too small to allow moderate or large chunks of food to move down into the stomach. A sad note was that she had been subjected to some fairly severe punishment strategies to "treat" her "operant vomiting." Based on the new information it was decided that "behavioral" treatment had been and would be folly, although there may be a role here for positive programming to teach the person better ways of communicating to others when she isn't feeling well. The answer was not "behavioral." Rather, the physician dilated the opening on three separate occasions and the problem subsequently disappeared.

In another case, interviewing had disclosed that the presence of a pretty female was an antecedent for the higher probability for the focus person to grab toward the intimate body parts of her's and others. In going through the records, it was discovered that this behavior first appeared during the onset of puberty. Further, it was discovered that the behavior was essentially absent for a six month period a few years previously, when the focus person was receiving sexuality training and was actively being given opportunities during the day to masturbate.

A records review can confirm hypotheses, raise questions about developing hypotheses, or even suggest new hypotheses that hadn't previously been considered. Records represent the written history of the person and as such may be particularly useful in identifying historical setting events for the behavior. Early childhood experiences, physical health, mental health, cognitive characteristics, family history and background and other areas of information gathering may be topics that we discuss separately in our assessment reports. However, they should be considered as part of our antecedent analysis, in so far as they may reveal setting events and even point us in the right direction to uncover and, very importantly, to understand the immediate antecedents that increase and decrease the likelihood of target behavior.

Direct Observation and Interaction. Finally, but certainly not the least of our information gathering strategies, is the direct observation of and interaction with the focus person. This is not to say that it is necessary to actually see the target behavior occurring. There is a good chance that we will not see "low rate" behaviors during the assessment period. And of course we would *not attempt to set off serious behaviors* just for the purpose of seeing them. Yes, we would like to have the opportunity to see an actual occurrence of the target behavior; but not at the expense of a person's safety or dignity.

On the one hand, the benefit of actually seeing the target behavior is that it allows us to see first hand the events leading up to it. For that event at least, we would not have to rely on staff or parent reports.

On the other hand, we must keep in mind that observation at times during which the behavior is not occurring also gives us information about the ecology, which may provide a setting event for the occurrence or non-occurrence of the behavior or even about antecedents. One technique for observations when target behavior is not occurring is to be aware of precursor behavior and to look for triggers for this category of responding. As we mentioned, while we would never "set the person up" for target behavior, through our interactions with the person, we may attempt to trigger a precursor response, if it is a relatively innocuous one and if we have a hypothesis to test. But we need to remember that such probes should be avoided if there is an increased likelihood of injury or injury to the person's dignity.

If the behavior does not occur during our observations, we may also be looking at direct evidence of antecedents associated with the lower rate of the behavior. One question to raise might be whether the very act of observation by a relative stranger can account for the non-occurrence of target behavior, attributing this, for example, to the influence of novelty or "wanting to make a positive impression." Perhaps, but maybe novelty and/or the opportunity to make a good impression, should be explored as predictable antecedents for the lower probability of problem behavior for the focus person.

One could say that all of the information gathered during observations of and interactions with the focus person is grist for the antecedent analysis mill, whether or not the target behavior occurs.

A records review can confirm hypotheses, raise questions about developing hypotheses, or even suggest new hypotheses that hadn't previously been considered.

For example, one of our staff was carrying out a parent interview concerning the aggression of her twenty three year old son. In the midst of the interview, in fact, an occurrence of target behavior occurred. On the surface, the behavior seemed to come out of the blue. On deeper reflection, however, a number of things were

observed that might contribute to the antecedent analysis.

Directly observed were the following: 1) the interviewer was directing all of the questions to the mother, with only marginal comments being directed to the focus person; 2) the questions, answers and conversation were very much focused on behavior problems; 3) the person's mother told him to do something that would require him to leave the room, without an explanation for the request; and 4) when he didn't respond, she repeated her *"command."* The aggression followed all of this.

...observations of and interactions with the focus person is grist for the antecedent analysis mill, whether or not the target behavior occurs.

In retrospect, we might consider that in this case, being treated as an object, the lack of common courtesy and discretion, being discussed in negative turns, and being told to do something as a child rather than being asked as an adult may be antecedents for the higher likelihood of aggression. Perhaps all of us would react in some negative way if we were also treated this way. In contrast, we might explore respectful and adult treatment, common courtesy and using the request form rather than the command form as possible antecedents for the lower likelihood of aggression. *(Of course, this example teaches us two things. Firstly, we can learn a lot about antecedents from direct observation. Secondly, we should be very respectful of our clients and not treat them any differently than we would want to be treated. We would want to be included in discussions about our behavior and if we could not be included, we would want people to be discrete and sensitive about our feelings and not discuss us and our behavior right in front of us as if we were not there.)*

In another example, we were observing staff interact with a man who had also been referred to us for aggression toward others. We sat in a corner, unobtrusively observing as we were going through the client records that had been given to us for review. The only other people in the room at the time were the focus person and his "one-to-one" staff. Things seemed to be going smoothly but we noticed that the staff person nonchalantly flipped a switch on a device he had on his belt. Otherwise, he just seemed to continue with the ongoing activity. We then noticed that three separate staff casually entered the room through three different doors. Each of them standing quietly by the door. Once all three had entered, they nodded to each other and casually started to walk slowly but somewhat inattentively toward the focus person and the staff who was working with him from their three points of entry into the room. Once they reached a distance of about twelve feet, their inattention disappeared and they continued to "close in" with more deliberation and focus. When they reached within approximately five feet, the "one-to-one" staff jumped back to join the enclosing circle of staff, who were looking with stark concentration directly at the focus person, with their hands and arms at the sides held slightly out from their slightly crouched bodies as they crept ever closer. As they closed to within four feet, the focus person looked around and realized he was surrounded and being approached by four somewhat menacing people. Looking around somewhat frantically and realizing that he had no way of escaping, he lunged toward the person right in front of him and attempted to hit him, kick him and grab at his hair and face. The four staff working together were able to physically control the focus person and injuries were avoided.

What was going on here? From staff point of view, the "one-to-one" staff person had observed what they had identified as a precursor to aggressive behavior. The plan was that when a staff person was alone and observed such behavior, they should signal other staff for assistance since it had been acknowledged that when the focus person was aggressive, a single staff person could not physically manage him safely, alone. Staff came to assist and gradually approached to be in a position to deal with the expected aggression when it occurred. From their point of view, they were perfectly situated when aggression occurred. Injuries were avoided. The plan worked.

What might have been going on, however, from the focus person's point of view? From his perspective, he was engaged in an activity and looked up suddenly to discover that he was closely surrounded by four men who were approaching him in a somewhat menacing manner. No explanation was provided. In reaction to this threatening situation, the focus person appeared to launch a preemptive attack, which was destined to fail as he was woefully overpowered.

From our point of view, there were many lessons to be learned from this one observed episode. To limit our comments to the current topic of antecedent analysis, we might hypothesize that having his personal space invaded and a perceived physical threat may be

antecedents to a higher likelihood of aggression, with this specific episode as an illustrative and supporting example. We might also hypothesize that having his personal space respected and the use of a nonthreatening style when working with him may be antecedents for the lower likelihood of this behavior. Our subsequent observations, interviews and records review would try to uncover evidence that would both support this hypothesis and also appear to contradict this hypothesis. In an antecedent analysis, concrete examples should be sought to support the conclusions reached. However, it is only through a thorough examination of the contradictory evidence that may exist that we can have confidence in the validity of those conclusions.

While passive observation can be helpful, as illustrated above, through our interaction with the focus person, we may also gather information to assist us in our antecedent analysis. (We would like to emphasize again that we would not purposely provoke an occurrence of target behavior, nor would we recommend this practice to others.) For example, during one assessment in which the focus person was a nine year old boy who engaged in high rate self-injurious behavior, we discovered that when we engaged him in a tightly structured discrete trial instructional session, self injury did not occur. This interaction supported one of the conclusions in our antecedent analysis that predictability and clarity in a task with clearly defined expectations and easily discriminated reinforcement for a correct response were antecedents for the lower probability of self-injurious behavior.

In another example, which we have cited elsewhere (LaVigna et al., 1989), we were performing an assessment for a young man who had been referred for "noncompliant aggression." As part of the assessment process, we had taken him for an excursion in the community. We gradually, carefully asked him if he would do increasingly unreasonable things. While we didn't want to see aggression, we were interested in seeing what it would take to provoke the more innocuous precursor behaviors that had been described to us. No matter how unreasonable the request, the focus person did his best to respond, quickly and with the biggest smile on his face. We never were able to provoke precursor behavior. However, we wondered what he would do if he was *unable* to perform the requested activity. To test this, we asked him to do something using strictly nonsense words. Lo and behold, what we saw was his quite remarkable *total lack of response* to this nonsensical request. Putting this interaction with other information we had learned, we were able to conclude that a *request to perform* was not the antecedent that increased the likelihood of aggression. It was somewhat more complex than that. The high likelihood antecedent was to be asked to do something in a confusing way that he did not understand and to be verbally pressured and physically *prompted* to perform that task. The low likelihood antecedent was to be asked to do something in a clear, concise, unambiguous way. When asked in this way, he was more than willing to do anything, with a smile.

Finally, our observations should take in more than observations of the focus person and their interactions with staff. We can also be making note of the ecology, that is, of the physical, interpersonal and programmatic environment. We are often struck by how we so easily take environments for granted and as givens and how we may overlook them as providing information about setting events and triggers for the higher and lower likelihood of target behavior. Sheer routine and sameness may produce boredom and a high likelihood setting event for one person, while novelty may be a setting event for a lower likelihood of target behavior. In contrast, another person may find predictability and sameness a low probability setting event and novelty and newness a high probability setting event for target behavior. Among other things, the environment can be observed for such setting events as noise; crowding; lighting; decor; variety and age-appropriateness of and the physical and cognitive demands placed by the activities observed; the degree of choice and control provided to the focus person; the characteristics of the other people who interact with the focus person; the expectations and attitudes others have for the person; etc.

In addition to examining the features of the environment, notes should also be taken as to what is missing from the environment and day-to-day experiences of the person. For example, the lack of affection, physical intimacy, family members, a pet, good friends, enjoyable and productive work, weekend trips, etc. may very well be setting events for the higher probability of problem behavior for us (e.g., moping around, overreacting to certain provocation's, lack of cooperation, etc.). Why wouldn't they be for the people we are working with. In contrast, the presence of such things in a

In an antecedent analysis, concrete examples should be sought to support the conclusions reached.

person's life might well immunize them from exhibiting behavior that others consider to be problematic. In fact, a good pair of glasses for examining the environment would be to consider how we would feel if we were living the focus person's life. People are people!

An ecological analysis is so critical in completing the functional analysis that we have a whole section on this is our assessment guide (Willis et al., 1993). Further, we plan to address ecological analysis as a topic in its own right in an article that will appear in a future issue of *Positive Practices.*

Writing an Antecedent Analysis

After gathering our information, we are ready to ask the conclusionary questions and write the antecedent analysis section of our behavior assessment and functional analysis report. As indicated above, the information we draw on in reaching our conclusions goes beyond that gathered in the antecedent analysis section of the *Behavior Assessment Guide* (Willis et al., 1993). It also very much relies on all of the background information we collected regarding the focus person and their characteristics, their family history and background, their living arrangement and day program or school placement, their health and medical status, the ecological analysis, the motivational analysis, etc. You might find it useful to develop a worksheet in preparing to write. Such a worksheet can help us make sure to include all of the relevant information in our report.

Table 4 shows just such a worksheet. It would allow us to list in abbreviated form both the antecedents that increase the likelihood of target behavior and those that decrease this likelihood. Further, we can with more refinement indicate what "triggers" make the precursor(s) more likely, make escalation to target behavior more likely, and/or make it more likely that an episode will continue and escalate. We can also indicate what "triggers" make the appearance of precursor behavior less likely, make escalation to target behavior less likely, if precursor behavior should occur, and/or make it less likely that an episode will continue and escalate, should target behavior occur. Referring back to what we wrote earlier, we need to remember that the *setting events* and specific *triggers* can emanate from the person's internal environment (e.g., pain), cognitive/mental environment (e.g., a belief), and/or the external environment (e.g., home, with George, at 2:30 PM, when criticized).

In addition to listing the triggers, the Preparation Worksheet also prompts us to list the setting events we have identified as a result of our behavior assessment and functional analysis information gathering process. It is at this point that we stand back from our

	ANTECEDENTS					
	High Likelihood			Low Likelihood		
	Precursor Behavior	Target Behavior	Episode Escalation	Precursor Behavior	Target Behavior	Episode Escalation
Setting Events						
1.						
2.						
3.						
Trigger Events						
1.						
2.						
3.						
4.						
5.						
6.						
7.						
Specific Incident Example						

Table 4 - Preparation Worksheet: Antecedent Analysis Summary

information, analyze, synthesize and summarize it, and *draw conclusions.* Finally, the form provides space for us to indicate which specific incidents or events reported or observed can be cited as examples to support the conclusions that have been reached. Having prepared a worksheet such as this, we are then ready to write this section of our report with confidence that we have as complete a picture as possible as to the antecedents to the target behavior.

Using the Results of an Antecedent Analysis

There are a number of ways that an antecedents analysis can be useful. In addition to giving us direct information as to the conditions, situations and events that both increase and decrease the likelihood of target behavior and its precursors, an antecedent analysis can also provide useful information for other parts of the functional analysis (Willis & LaVigna, 1996a; 1996b). For one thing, the results of our antecedent analysis might help us in completing the consequence analysis. For example, we might have learned in the antecedent analysis that the target behavior is more likely to occur when the focus person is not with a particular staff person and is less likely when they are together. This suggests at least two possibilities that might be explored in the consequence analysis. Possibility number one would be that time spent with this staff person is a reinforcing event for the focus person and the withdrawal of the staff person under certain conditions may represent an aversive event. Possibility number two would be that the staff person has used aversive control in the past and therefore represents a discriminative cue for the focus person to suppress target behavior in order to avoid punishment.

A second example of how to use the results of the antecedent analysis is that it can help us to interpret the meaning of the behavior. Ultimately, the goal of the behavioral assessment and functional analysis is to understand the behavior from the focus person's point of view. The results of an antecedent analysis can make a significant contribution toward this goal. For example, we may have discovered that the behavior is more likely to happen when there is a lack of interesting and varied activities and is less likely to happen when the person is involved in a rich schedule of varied and interesting activities that have been largely self selected. If consistent with all of the other information gathered, this might help us conclude that the target behavior is the focus person's way of saying "...I'm bored!"

Finally, the antecedent analysis can be very productive in generating ideas for developing the support plan for the person. Very few examples of these follow:

Ecological Strategies: Typically, in performing an antecedent analysis, we learn that certain environment features increase the likelihood of target behavior and others decrease the likelihood. Accordingly, we may recommend changes to the environment to more smoothly fit the environment to the person's needs and characteristics. For example, we might learn that a noisy environment is a setting event for the higher likelihood of target behavior. Our plan may therefore include the somewhat obvious strategy of keeping things quite, at least until the person has learned to tolerate naturally occurring loudness. As another example, we might learn the use an "active listening" style may be a setting event for the lower probability of target behavior. Our plan may therefore recommend that staff adopt this style. Finally, we might learn that the behavior rarely if ever occurs in the community. We may accordingly plan to schedule as much time in the community as possible.

Positive Programming: An antecedent analysis might also help us see what skills might be important to teach. This would apply to all four categories of positive programming skills, i.e., general, functionally equivalent, functionally related and coping and tolerance skills (LaVigna et al., 1989; LaVigna & Willis, 1995). For example, we might have learned that the focus person's dependency is a setting event for target behavior. As part of our solution, we might therefore provide instruction to give the focus person independence, i.e., the ability to perform the activity without staff presence or participation, in going down to the corner convenience store to buy a candy bar, in preparing a favorite snack, or in turning on the CD player. We may have learned that frustration is antecedent to the higher probability of target behavior, leading us to teach the focus person how to ask for a break. We may have learned that being teased is a trigger for target behavior, inspiring us to teach the person the "sticks and stones" rule. As a final example, we may have learned that having to wait is an antecedent for the higher probability of target behavior. In learning this we may decide to develop an instructional program to give the person better skills for dealing with delay in gratification.

Focused Support: This may be the more obvious place for using the information derived from an antecedent analysis. To put it simply and obviously, we should arrange things such that the focus person has minimum contact with those antecedents associated with the higher likelihood of target behavior and has maximum contact with the low probability antecedents. To the extent that

this antecedent control is prosthetic, artificial and contrived, it should be temporary and removed once more permanent solutions are found. For example, if criticism is a trigger for target behavior, we may artificially avoid using *any* criticism until our positive program has been successful in teaching the person how to cope with and tolerate at least the level of criticism that most people experience from time to time. To the extent that the antecedent control represents a move to a more normalized life style, it might be considered as a more permanent change. For example, if a low density of noncontingent reinforcement has been identified as a high probability setting event, a high density of noncontingent reinforcement may be arranged. If this "high" density of reinforcement is in fact no higher than that experienced by the typical person who is not challenged with a disability, arrangements may be made to maintain it indefinitely.

Reactive Strategies. The results of an antecedent analysis can also be helpful in developing reactive strategies, to the extent that these may be needed as part of a multielement support plan. For example, we may have learned that close physical proximity of staff is a trigger for target behavior and that distances of at least 12 feet is a "trigger" for the lower probability of target behavior. Accordingly, our recommendation may be that if target behavior should occur, staff should move away to a 15 foot distance between them and the focus person.

These are only a few examples of the many ways that the results of our antecedent analysis can help us generate ideas for inclusion in our multielement support plans. In its infancy, the field of positive practices had access to very little information in this area (e.g., Donnellan, LaVigna, Negri-Shoultz, & Fassbender, 1989; LaVigna & Donnellan, 1986; Touchette, 1983). Fortunately, more recently, this has been an expanding area of interest (e.g., Luiselli & Cameron, in press)

Conclusion

The process of behavioral assessment and functional analysis is one that is complex, dynamic and interactive. Even as a complete antecedent analysis requires all of the background information, ecological analysis, motivational analysis, etc., it can also benefit from information gathered from other sections of the functional analysis (Willis & LaVigna, 1996a; 1996b). The antecedent analysis itself also contributes to an understanding of these other areas and to the ultimate understanding of the meaning of the target behavior for the person. We would like to suggest that the complex, dynamic and interactive nature of the process argues against a kind of undefined, global, indiscriminate approach to assessment as opposed to a clearly defined approach which identifies the different categories of information that needs to be considered, how that information can be gathered and how it can be integrated, analyzed, synthesized and summarized in such as way as to provide a helpful insight into the person and what their behavior may mean for them.

In this article, we attempted to describe the contribution of antecedent analysis to the process of behavioral assessment and functional analysis. As such, it should be considered to be an addition to the series of past and future articles on this topic in *Positive Practices.*

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Procedural Protocol - Biting

Millie Fernandez, Behave R' Us, Winter Park, FL

Editors' Note: The following protocol is based on an assessment conducted by Millie Fernandez, a participant of the 1997 IABA Summer Institute conducted in Los Angeles. The procedural protocol presented below was developed for a 4-year-old boy who carried a diagnoses of Asperger's Syndrome. The protocol describes a multi-tiered DRO for a behavior labeled as "biting" developed with his young age in mind. While biting was estimated to occur about once a week, it was felt that he would not connect reinforcement for the absence of the behavior every three days with what he does daily. Thus, verbal reinforcement for the absence "biting" along with the giving of a "star" token were given each hour for the absence of biting. The hope here was the frequent hourly reminders would increase the likelihood that Karl would learn the rule regarding "biting." The "stars" accumulate to achieve reinforcement at the end of the day. "Tier Three" represents the level of reinforcement that most closely adheres to the DRO "Goldilocks Rule." To achieve reinforcement, Karl must not engage in biting for three consecutive days. The "Race Car" monitoring device is designed to help Karl predict his closeness to the reward (i.e., Finish Line).

Please notice that this protocol incorporates the definition of the target behavior. For this reason, this issue of Positive Practices will not, in contrast to previous issues, have a separate column defining a target behavior.

Protocol

Name: Karl Rudin
Date Developed: July 23, 1997
Protocol Name: Differential Reinforcement of Omission For Biting

A. Target Behavior and Operational Definition: Biting
- *Topography.* Biting is said to occur any time Karl's teeth come into contact with the flesh or clothing of another person.
- *Cycle.* For purposes of recording, biting begins as soon as Karl's teeth make contact a person's skin or clothing. Biting ceases when Karl's teeth are no longer in contact with a person.
- *Course.* Biting is usually preceded by a person "violating" Karl's space. In other words, people get close to him. When this happens, Karl will give warning signs such as angry look, pushing the person or clenching his teeth. If people do not move away, he is likely to initiate biting.
- *Strength.* Biting is reported to occur about once a week. It has not resulted in serious damage, but he has drawn blood requiring minor first aide and tetanus shots. Staff describe his bites as painful.

B. Observation and Data Collection Methods
1. *ABC Incident Analysis.* Incidents of BITING should culminate in the completion of an ABC Analysis. Since the behaviors occur at a fairly low rate, the ABC method is reasonable given the current staffing ratio. The ABC Analysis should be used for ongoing analysis of the variables controlling the occurrence of Karl's behaviors. Each event should be recorded on a prepared form indicating the following:
   - The time of occurrence,
   - The activity in which the behavior occurs,
   - The setting in which the behavior occurs,
   - The immediate antecedents of the behavior,
   - The consequences applied to the behavior (reactions)
   - The specific actions involved in the episode (e.g., contact with teeth, tear clothing),
   - The severity of the behavior (e.g., no damage, left teeth marks, ripped clothing, broke skin, first aid, etc.).

C. General Program Issues
1. *Where Will Plan Be Implemented?* The DRO will be carried out in the school setting.
2. *When Will Plan Be Implemented?* The DRO will be carried out during the time that Karl is in school.
3. *Who Will Be Responsible For Implementation?* The school staff will be responsible for implementing the DRO in the school. The parents will provide backup reinforcement in the home setting.
4. *What Materials Or Equipment Will Be Needed?*
   - Stick-On Stars
   - 3 X 5 Inch Index Cards
   - Star Menu
   - Race Car Chart
   - Special Prizes
5. *Pass Criterion.* Data will be reviewed on a weekly basis to determine Karl's progress. The size of the DRO interval will be recalculated when Karl has achieved an average of 80 percent of the avail-

able reinforcers over two consecutive weeks.

6. *Fail Criterion.* Data will be reviewed on a weekly basis to determine Karl's progress. If the percentage of reinforcement has not increased beyond 50 percent and/or if no behavior change has been observed over a period of 4 consecutive weeks, the treatment team will be reconvened to revise or change the support plan.

D. *Differential Reinforcement Of Omission For Biting.* A DRO should be used to reduce the likelihood of Karl's biting behavior. This can be done using a multi-tiered plan. The following represents an idea statement as to how this might be accomplished:

1. *Tier One*
   - Karl should be reinforced EVERY HOUR for the absence of biting. At the end of each hour, Karl should be told "You are playing very nicely and you have NOT BITTEN. Thank you." This is an extremely important step for a 4-year-old. He requires frequent reminding about the RULE. The rule is "NO BITING."
   - At the same time Karl should be given a "STAR." The star may be written or it may be a stick-on star. The STAR should be placed on a 3 X 5 index card that has been sectioned into FIVE SEGMENTS. At the time that the STAR is delivered, he should be asked "Karl, why did I give you the STAR?"
   - At the end of the school-day, Karl should exchange his "STARS" for a prize. The prize should be something worth a days work. If we assume that Karl has the potential of earning 5 stars each day, then he should be able to get some prize for 4 stars and something much more meaningful for 5 stars. For example, for 4 stars Karl might be able have a special story read to him; but for 5 stars he might be able to have a special story and go with his parents for an ice cream.

2. *Tier Two*
   - In addition, each day that Karl does not engage in biting, he will MOVE HIS RACE CAR (See Figure 1). The race car will begin in the START BOX. (This is easy to prepare with a picture of a laminated race car and velcro.) There are three other BLANK BOXES on the chart, one for EACH CONSECUTIVE DAY without biting.
   - On the first day he does not bite, he will move his race car to the first open box on the racetrack.
   - On the SECOND CONSECUTIVE DAY without biting, he will move his race car to the second open box on the racetrack.
   - On the THIRD CONSECUTIVE DAY without biting, he will move his race car to the third open box on the racetrack. At that point he will have WON THE RACE and will have the opportunity to select something from the SPECIAL PRIZE LIST.
   - At the beginning of each day, Karl should be asked what he needs to do TO MOVE HIS RACE CAR.
   - If Karl engages in biting, his car will RETURN TO THE STARTING LINE. When this happens, Karl should be encouraged to try harder to GET HIS CAR TO THE FINISH LINE.

E. Reactive Strategies

1. Biting is usually preceded by a person "violating" Karl's space. In other words, people get close to him. Frequently, environmental events can be identified that are "cues" for escalation. When this happens, Karl will give warning signs such as angry look, pushing the person or clenching his teeth. If people do not move away, he is likely to initiate biting.

   In the case that Karl is manifesting the precursors to biting, every attempt should be made to reduce environmental factors that might lead to the behavior. For example, overall congestion may be reduced by redirecting Karl to a quiet area. In his classroom, this is his "cozy corner." You might say, "Karl, you seem to be getting upset. Let's go to your cozy corner to calm down."

2. *Stimulus Change.* There are several things that you can do that may interrupt Karl's escalation or his actual biting. In the first place, the introduction of a novel stimulus may divert Karl for an instant or for even longer periods. People who know him have reported that Karl

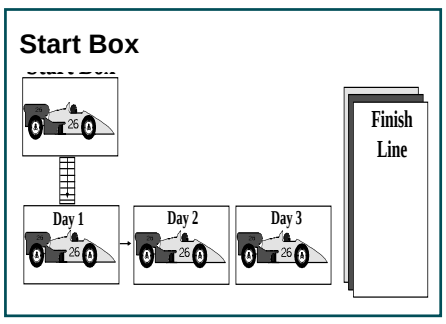

Figure 1 - Karl's Race Car Chart

may stop "anything" and "everything" he is doing if he hears a loud noise, if someone begins singing or he hears music. Therefore, when Karl is escalating or is frankly engaged in the behavior, and if redirection to the cozy corner has not been effective DO SOMETHING UNEXPECTED. Begin singing Karl's favorite song, start coughing loudly, clap your hands, jump up and down.

3. *Strategic Questions and Instructions.* Asking a question may evoke a response that competes with or intrudes on Karl's escalation or biting. When he is escalating, you might ask him "Where is your toy car?". Another way to react as Karl is escalating, or even when he is biting is to give him an instruction that is likely to evoke a COMPETING ACTION. Some of the known intruding instructions for Karl include directing him to jump, to turn around, and to clap his hands.
4. *Release.* At the moment of biting and if Karl does not release using the above procedures, you (the person being bitten) should gently press the body part being bitten toward Karl's mouth until he releases (Note: All staff working with Karl should have received California approved emergency management training and should have received special training around biting.
5. *Effect on DRO.* After Karl engages in a biting incident and he has regained control, he should be reminded that he has not earned his STAR and that you know he will work harder the next time. He should be asked what he needs to do to get stars and to move his race car.

Letters to the Editors...

Dear Gary and Tom,

Thank you for publishing my letter in your magazine. I would like to visit America one day but I am thinking that I might travel to England first. It all depends on saving money for future dreams. My work at Stitches and Prints is keeping me busy, and so is the housekeeping in my flat.

A short time ago I worked at the Police Station for a day, doing photocopying and other things that helped the police do their work. They are my best friends in the whole world.

I have been writing to Nettie, the pen pal who replied to my letter in your magazine. She has sent me photos of herself and her friends at New Hope Village, and I have sent her some photos of my trip to Fiji.

It has been very exciting to receive letters form Nettie, so thank you once again for helping us get together. Nettie and I will be keeping in touch because she is now one of my best friends. I would enjoy writing to other friends like Nettie. Would you please help me find some other pen pals by printing this letter in your magazine.

Yours sincerely,

Celine Wooding
2/43 Bega St
Bega
NSW 2550
Australia

— ♦ — ♦ — ♦ —

Dear Gary and Tom,

It's been awhile since our winter institute in Helena, Montana. Hope all's well with you. We're betting you stay quite busy keeping up with IABA business.

We need some guidance! Our Developmental Disabilities Client Programming Technician (DDCPT) curriculum committee asks your assistance in clarifying the difference between two behavior management techniques.

There is confusion with our definition of "chain interruption," as it compares to "stimulus change." In our DDCPT final exam, some staff students go so far as to use virtually the same example to describe each. We know the definition of stimulus change, as stated in "Alternatives to Punishment." Our DDCPT curriculum defines chain interruption as "a technique whereby the rate of someone's behavior may be reduced by manipulating antecedent behaviors."

E.g., When an antecedent behavior occurs, provide a change which will break the chain and prevent the target behavior from occurring. Example: Brenda would rub her eyes and then strike the person nearest her. When she rubs her eyes, staff direct her hands to an activity such as a puzzle, thereby breaking the chain.

Questions:

1. How is the above example of chain interruption different from stimulus change? We know that verbal or gestural redirection is not as dramatic as clapping one's hands, turning a light on and off or running to the window and pretending to see a thief. But did we not create stimulus change when we redirected Brenda?
2. Is it simply the "novel stimulus" or "dramatic alteration" that qualifies it as a stimulus change? Is stimulus change a more

intense option that could be considered when chain interruption is unsuccessful?

3. In *Progress Without Punishment* the introduction of the new stimulus (stimulus change) condition is not contingent upon or related to the occurrence of the target behavior. However, the definition of crisis intervention (on page 130) does not preclude the use of stimulus change to disrupt an ongoing behavior. In fact, the procedures labeled "stimulus change" on pages 48 (case #20) and 49 (case #21) of the IABA *Forms and Procedures Manual, Volume 2* appear to be used contingent upon the occurrence of aggressive (target) behavior. So is stimulus change an incorrect term to describe what we do to break the chain of the ABC paradigm (whether or not the antecedent to a target behavior has occurred)?

We've reviewed the "white whale" and IABA textbooks. Frankly, the more we read about stimulus change the more we wonder: Is stimulus change merely a dramatic form of chain interruption or a different technique altogether?

So, we're seeking guidance for how we may more precisely distinguish between the two. It would help if we could get an example of each that clearly shows the difference.

Thank you for your help.

Harry Guetherman
Montana Department of Public Health and Human Services
Developmental Disabilities Program
1824 10th Ave. S #10-B
Great Falls, MT 59405

— ♦ — ♦ — ♦ —

Dear Harry,

Thank you for your letter. It is always nice to hear from our friends in Montana. You have asked us to try to clarify the distinction between "chain interruption" and "stimulus change." We'll give it a try.

Chain interruption is based on the notion that problem behavior occurs as part of a predictable pattern of behavior in which different events can be viewed as the stimulus, the behavior or the consequence, depending on our perspective. Consider the following diagram which illustrates a hypothetical "chain" of behavior which might be exhibited by a person:

R1 ---- R2 ---- R3 ---- R4 ---- R5
Sd ---- R2 ---- C
Sd ---- R3 ---- C
Sd ---- R4 ---- C

In this example, we might consider responses R1 and R2 as precursor behavior, R3 and R4 to be target behavior, and R5 to be post-cursor behavior. For the moment, not considering the stimulus events, i.e., the *antecedents*, that might be provided by the environment, we can see that R1 might be looked as a discriminative cue for R2 which is followed by R3, which might then be considered as the consequence for R2. *(See the distinction we make between antecedents and precursors in the Antecedent Analysis article elsewhere in this newsletter.)* In such a chain of behavior, each response becomes a discriminative cue for the response that follows it and a consequence for the response that precedes it.

Chain interruption is an attempt to prevent the precursor behavior from escalating to target behavior or, once target behavior has occurred, to prevent it from continuing or escalating in severity. As such, it is probably more helpful to think of chain interruption as a desired outcome rather than as a procedure.

Stimulus change is one of a number of procedures which can result in chain interruption. It involves the *...noncontingent and sudden introduction of a novel stimulus or dramatic alteration of the incidental stimulus conditions. "Incidental" refers to the nonfunctional role the stimulus plays in the contingency rules governing the target behavior* (LaVigna & Donnellan, 1986). So, for example, suddenly singing a song, doing a somersault or laying on the ground are probable examples of stimulus change, since those events are not to be playing a functional role with the target behavior. Their noncontingency is measured by a number of features: 1) these events may vary with each application of stimulus change; 2) stimulus change may represent only one of a number of reactive strategies that are employed with the target behavior and may in fact be used very sporadically; and 3) the events that are used in stimulus change may in fact occur at times other than in reaction to target behavior, either serendipidously or as a part of an totally independent schedule. For example, singing may take place when with the church choir or you may start singing as you are doing the dishes together.

When such an introduction of a novel stimulus or alteration of incidental stimulus conditions results in an interruption in the target behavior, we have achieved chain interruption. Examples of other procedures that can result in chain interruption might include reminding somebody of the reinforcement they are working for in a DRO or DRL schedule of reinforcement or even "warning" somebody that they might end up in the time-out room or that they might lose privileges if their behavior continues. The latter, of course, would represent aversive procedures and would not, therefore, be something that we recommend.

At a more subtle level, we would like to address redirection as another chain interruption strategy.

The question is, is redirection simply a low level form of stimulus change? Keeping in mind that the definition of stimulus change involves an alteration of the incidental stimulus conditions, we might consider that redirection to a competitive reinforcing activity does involve the contingency rules governing the target behavior insofar as the introduction of an effectively competitive reinforcer would, other things being equal, distract the person from engaging in the target behavior. That is, by introducing the opportunity for another reinforcer, we have reduced the ability of the reinforcer available for the target behavior to maintain that response. To put it back in terms of the behavioral chain, one way to interrupt a behavioral chain is to offer another one that leads to a different and perhaps even more powerful reinforcer.

For reasons such as these, we would not consider redirection or similar procedures to be examples of stimulus change, although they may lead to chain interruption. The definitional need for the stimulus change procedure to employ stimuli that are not functionally related to the target behavior suggests that it is likely to involve nonsensical and dramatic events that are suddenly introduced. It is the differentness that is introduced that produces the chain interruption in stimulus change. This is why stimulus change effects are short lived, typically requiring a transition to other reactive strategies, e.g., active listening and problem solving or redirection to a competing activity. In contrast, redirection or other strategies may be sufficiently distracting with their competitive reinforcement to prevent a return to the target behavior chain.

Needless to say, which reactive strategies are included in an individual support plan should be a function of a thorough assessment and functional analysis and reflect the needs and characteristics of the focus person. Even so, we hope that this has helped clarify both the distinction and the relationship between stimulus change and chain interruption.

Thank you very much for writing. We look forward to hearing from you again in the future.

Warm regards,
Gary and Tom

Resources

Training Calendar

Assessment and Analysis of Severe and Challenging Behavior
Gary W. LaVigna & Thomas J. Willis

This competency-based training practicum provides participants with the clinical skills required to design and implement person-centered multielement nonaversive support plans.

Hamilton, New Zealand • January, 1998
Los Angeles • July, 1998
London • October, 1998

IABA's International Conference to Advance Positive Practices in the Field of Challenging Behavior

Enrollment limited to previous participants in IABA's Two Week Institute and Longitudinal Training.

Walt Disney World, FL • January 1999

Positive Approaches to Solving Behavior Challenges and The Periodic Service Review
Gary W. LaVigna & Thomas J. Willis

Positive Approaches… are 2, 3 & 4 day seminars that present IABA's multielement model for providing person centered nonaversive behavioral supports to people with challenging behavior. These seminars cover Basic Principles of Nonaversive Behavior Support, Behavioral Assessment and Emergency Management. Assuring Staff Consistency Through the Periodic Service Review: A Quality Management and Outcome Evaluation System is a 1 day seminar that teaches participants a staff management system that ensures the agency/school is providing quality services.

December, 1997 - US Seminars (Philadelphia and Albuquerque)
January, 1998 - New Zealand Seminars (Hamilton)
February, 1998 - US Seminars (Savannah, GA)
July, 1998 - US Seminars (Los Angeles)
October, 1998 - UK Seminars (London, Edinburgh, Belfast, Manchester, Sheffield, Birmingham)

1997 TASH Conference

"We the People, ALL the People"
Boston • December 10-13, 1997

Other venues will be arranged and announced at a later date. For detailed, current information on any seminar, contact:

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PO Box 5743 • Greenville, SC 29606-5743 USA
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Internet: jmarshall@iaba.com • http://www.iaba.com
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Positive Approaches to Solving Behavior Challenges

This is a 6 module video training program that teaches viewers IABA's person centered multielement model for developing nonaversive support plans for people with challenging behavior. Two text books, lecture notes and pre/post tests are included. $1,250.00

Staff Supervision and Management Strategies for Quality Assurance

This is a 4 module video training program based on *The Periodic Service Review: A Total Quality Assurance System for Human Services and Education.* Viewers will learn concrete strategies to ensure that the highest quality services are being provided by their agency/school. Text book, lecture notes and participant exercises are included. $750.00

For more information, contact:

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Printed Resources Available from IABA

Alternatives to Punishment: Solving Behavior Problems with Nonaversive Strategies
G.W. LaVigna & A.M. Donnellan

"(This book) provides a comprehensive treatment of alternatives to punishment in dealing with behavior problems evidenced by human beings at various levels of development and in various circumstances. Based upon their own extensive observations and a thoroughgoing analysis of relevant experimental studies, (the authors) have put together a document that is at once a teaching instrument, a summary of research, and an argument for the use of positive reinforcement in the treatment of inadequate or undesired behavior… a landmark volume which should forever lay the ghost that aversive methods (even the ubiquitous 'time out') need to be applied to the delinquent, the retarded, or the normal 'learner,' whether in the home, the school, the clinic, or other situations." — Fred S. Keller (From the Preface to *Alternatives to Punishment*) - paper, $19.50/ ISBN 0-8290-1245-1

The Behavior Assessment Guide
T.J. Willis, G.W. LaVigna & A.M. Donnellan

The Behavior Assessment Guide provides the user with a comprehensive set of data gathering and records abstraction forms to facilitate the assessment and functional analysis of a person's challenging behavior and the generation of nonaversive behavioral support plans. Permission has been granted by the authors to reproduce the forms for professional use. -spiral, $21.00

Progress Without Punishment: Effective Approaches for Learners with Behavior Problems
A.M. Donnellan, G.W. LaVigna, N. Negri-Schoultz, & L. Fassbender

As individuals with special educational and developmental needs are increasingly being integrated into the community, responding to their challenging behavior in a dignified and appropriate manner becomes essential. In this volume, the authors argue against the use of punishment, and instead advocate the use of alternative strategies. The positive programming model described in this volume is a gradual educational process for behavior change, based on a functional analysis of problems, that involves systematic instruction in more effective ways of behaving. The work provides an overview of nonaversive behavioral technology and demonstrates how specific techniques change behavior through positive means. The extensive examples and illustrative material make the book a particularly useful resource for the field.-paper, $17.95/ISBN 8077-2911-6.

Social Skills Training for Psychiatric Patients
R.P. Liberman, W.J. DeRisi, & K.T. Mueser

This guide to the application of social skills training with psychiatric patients systematically provides clinicians with the ingredients necessary to start and run their own social skills groups. Case examples, transcripts of social skills training sessions and exercises aid the reader in applying the training methods.-paper, $28.95/ISBN 0-08-034694-4

The Role of Positive Programming In Behavioral Treatment
G.W. LaVigna, T.J. Willis, & A.M. Donnellan

This chapter describes the role of positive programming in supporting people with severe and challenging behavior. After discussing the need for positive programming within a framework based on outcome needs, variations of this strategy are delineated. Then, assessment and analysis are described as critical for comprehensive, positive, and effective support. A case study of severe aggression is presented to illustrate the process of assessment and analysis, the supports that follow from this process, and the long term results of this approach. - spiral, $5.00

The Periodic Service Review: A Total Quality Assurance System for Human Services & Education
G.W. LaVigna, T.J. Willis, J.F. Shaull, M. Abedi, & M. Sweitzer

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THE IABA NEWSLETTER

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Mediator Analysis

Thomas J. Willis and Gary W. LaVigna,
Institute for Applied Behavior Analysis

Introduction

As Clinical Behavior Analysts, we are called on to make recommendations to parents regarding their children, to teachers regarding their students, and to staff regarding their consumers/clients. For example, we ask parents to record on a calendar each time that their child has a tantrum and we ask that they reinforce "consistently" each time that the child is cooperative or does not have a tantrum. We ask the teacher to allow the child to take a break when he presents a "red card" and to deliver a token (i.e., happy face on a sheet of paper) at random intervals throughout the day when the child is "on task." (The teacher has 13 other students in her class.) We ask group home staff to use "active listening" when one of their charges has a tantrum and breaks property in the home. We make these recommendations and frequently become frustrated when they are not implemented as we suggested. We may describe the parent who is inconsistent in his/her data collection and does not reinforce as suggested as "noncompliant" and we may suggest that the family does not need or at least not want the help.

We frequently make recommendations assuming that they can be carried out; that those to whom we have given the recommendations believe in what we have recommended, want to participate, are motivated to participate, and have the physical/technical skills to do what we have suggested. Traditionally, little attention has been given to these issues in the field of Behavior Analysis. **These are Mediator Issues.**

Mediators are those individuals who we would expect to carry out a support plan (e.g., parents, teachers, staff), to carry out our recommendations (see Tharp & Wetzel, 1969). In order for a support plan to be successful, the people who are responsible for carrying out the plan must want to. They must be motivated to participate, they must have the skills, they must have the physical and emotional abilities to carry out the plan, and there must be sufficient people resources (i.e., staff to client ratio) to implement the plan (Carr et al., 1994).

In the Mediator Analysis, we attempt to answer several questions, including the following:

- Do the mediators wish to participate in implementing the support plan?
- Are the mediators likely to cooperate with our recommendations?

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Editors' Note...

In this issue of *Positive Practices* we continue our presentation of issues related to Behavioral Assessment; namely, Mediator Analysis. This is an often overlooked, but extremely important, component of an assessment. We are sure that many of you have experienced a situation where after spending many hours conducting a behavioral assessment, and designing a support plan, the people who are supposed to implement the plan just don't do it, or can't. In this article we identify some of the mediator issues that must be taken into consideration when designing a support plan. Remember, not everyone can do what we recommend and not everyone wants to. It is important to identify these counter-therapeutic issues up front through a Mediator Analysis.

Gary W. LaVigna, PhD
Clinical Director

We also want to take this opportunity to announce a new column that will be added to future issues — "The Creative Corner." The purpose of this column is to take advantage of your CREATIVITY. It has been our experience many good treatment ideas are never known outside of the individual support plan for which they were designed. What a waste of creative efforts. Wouldn't it be nice if there were a place where professionals could share their ideas, their strategies, their innovative thoughts with other professionals. Wouldn't it be nice if we didn't always have to REINVENT THE WHEEL. In this endeavor, we invite you to submit your ideas. Describe unusual and exciting reward programs, describe how crises were averted through creative reactions, describe new and novel teaching strategies, describe how behaviors changed as a result of simple, non-intrusive ecological changes, etc. When you submit your ideas, give us a short description of the person (e.g., age, sex, disability, level of learning difficulty) and the challenging behavior(s). We will contact you if we select your ideas for publication. Your ideas can be submitted on our web site at http://www.iaba.com, or you can send them to our Los Angeles address. WE HOPE TO HEAR FROM YOU.

Thomas J. Willis, PhD
Associate Director

We also want to announce that in the very near future, psychologists will be able to earn APA approved CE credit on-line for reading *Positive Practices* and our other resources and for attending seminars. More information will follow on this topic.

Gary W. LaVigna and
Thomas J. Willis, Co-editors

An Application of Crisis Services Within the Multielement Approach: A Community Behavioral Support and Crisis Response Demonstration Project

Joan M. Oslund and Wayne H. Larson, Mount Olivet Rolling Acres, Minneapolis, Minnesota
Cynthia Rudolph and K. Charlie Lakin, University of Minnesota, Center for Residential and Community Services, Minneapolis, Minnesota

Editors' Note: Since the mid-1980's there has been an international effort to move people out of large state and national institutions into local communities. This effort burgeoned in the 1990's in the United States as many state institutions were being closed. Unfortunately, many people returned after unsuccessful placements, while others were placed in state institutions for the first time. A vast majority of the placements in state institutions were because of behavioral challenges that ostensibly could not be managed in the community for lack of resources. In this article, Joan Oslund, Wayne Larson, Cynthia Rudolph and Charlie Lakin report on a two-year demonstration project in Minnesota designed to reduce the number of people who return to state institutions from the community or enter for the first time. The results, although preliminary, are exciting in that they show a positive impact and demonstrate a further application of the Multielement Model.

Introduction

The impact of challenging behavior on the community service options and social opportunities of persons with developmental disabilities has been well documented. Individuals exhibiting challenging behavior are at greater risk of being "demitted" from their community residences (Borthwick, 1988; Bruininks, Hill & Morreau, 1988), and often face more obstacles to acceptance by community service providers (Hill, Lakin et al., 1989; Scheerenberger, 1981) than their counterparts without behavioral challenges. They are also more likely to be admitted or readmitted to large public institutions (Hill & Bruininks, 1984; Intagliata & Willer, 1982). The presence of challenging behavior with persons with developmental disabilities has been shown to limit opportunities for social interactions and relationships (Anderson, Lakin, Hill & Chen, 1992). In addition, challenging behavior may exclude many persons with developmental disabilities from the positive advantages of community living, that have been greatly advanced by service changes in recent years.

A number of community behavioral support and crisis response programs have been created in recent years to address the needs of individuals with developmental disabilities who display challenging behavior (Beasley, Kroll, & Sovner, 1992; Colond & Weiseler, 1995; Davidson et al., 1994; Donnellan, LaVigna, Zambito, & Thvedt, 1985). These authors have pinpointed various features of their successful programs.

Given the high comorbidity of developmental disabilities and psychiatric disorders and the significant potential for the misdiagnosis of psychiatric problems (Marcos, Gil & Vasquez, 1986; Menolascino, 1989; Reiss, 1990; Woodward, 1993), a key ingredient in existing models is the inclusion of mental health professionals. Models for the provision of crisis services stress interdisciplinary approaches, including the incorporation of psychiatric expertise into the treatment teams (Beasley et al., 1992) and linkages with the mental health system at both primary and tertiary levels (Davidson et al., 1995).

A second important aspect of crisis service models is an emphasis on prevention. Colond and Weiseler (1995) document the effectiveness of providing such services within the context of individuals' existing community residences. Davidson et al. (1995) stress the early identification of individuals who may be at risk of needing crisis services and training for those individuals, their families, and service providers. Preventative approaches also emphasize the importance of developing the crisis management and identification competencies of community service providers and families (Beasley et al., 1992; Davidson et al., 1995).

Some existing crisis service models provide "less restrictive" short-term residential alternatives to psychiatric hospitalization and, in in-

stances in which such hospitalization is necessary, the enhancement of hospitalization through coordinated efforts. For example, Davidson et al. (1995), describe a "continuum" of residential options, ranging from respite and group homes specializing in behavioral interventions, to collaborative work with inpatient psychiatric units and intensive post-discharge follow-up. Beasley et al. (1992) recommend short-term (i.e., not more than 30 days) mental health respite care in community-type settings and, when necessary, psychiatric hospitalization conducted with the supervision of the specially-trained crisis team.

…these individuals were admitted for short-term stays in response to behavioral crises…

This paper discusses the development of a two year demonstration project in Minnesota. Like a number of other states, Minnesota is rapidly closing state institutions for persons with developmental disabilities. In just five years between June 1990 and June 1995, the state institution population decreased from 1,337 to 524 people. Despite the rapid depopulation of Minnesota's state institutions, during the same period an average of 122 people were admitted each year back to state institutions. The vast majority of these individuals (77% in 1994) were admitted for short-term stays (less than 90 days) in response to behavioral crises and other emergencies. It is planned to provide 30 - 50 beds in a central state-operated program - the Minnesota Extended Treatment Option (METO). Building of the small cottages will begin in the summer of 1997.

Method

Program Description

In 1992, the Minnesota State Legislature responded to a request from various state, county, and community agencies by authorizing funding for a single community crisis intervention and behavioral support programs for persons with developmental disabilities (DD). This project, the "Special Services Program" (SSP), is located within an ICF/MR (Intermediate Care Facility for [persons who are] Mentally Retarded) in a suburb of Minneapolis to serve five counties in the western Minneapolis metropolitan area. Two goals were established for the SSP. The first was to prevent out-of-home placements due to behavioral episodes or, when necessary, to provide a short-term residential community alternative to psychiatric and state regional center admission. The second goal was to keep the at-risk individuals in their homes and communities at equal or lower costs than would have been expended for more restrictive residential treatment.

Program Characteristics

The SSP provides two types of services: outreach in the individuals' home, workplace, school, or other community settings; and short-term (i.e. 90 days or less) inpatient treatment in a specialized unit. Both services involve a interdisciplinary team focusing on nonaversive behavioral interventions guided by a functional analysis of challenging behavior. The teams include a program director with extensive experience in mental health, two behavior analysts, a psychiatric nurse, an intake worker, and (on the unit) experienced direct care staff. It is further supported by on-going consultation with a board-certified psychiatrist and licensed psychologist. Based on this model, the SSP team is able to assess a range of environmental, medical, psychiatric, psychological, and communicative factors that may contribute to the individual's at-risk status.

Outreach services include functionally analyzing the challenging behavior for which the client is referred, technical assistance in devising appropriate methods of intervention, and careprovider training. The residential unit provides intensive support and intervention for clients whose behavioral challenges seriously jeopardize their current residential or other service participation. Consultation is provided by the SSP staff on long-term planning of more appropriate accommodations and supports to permit the individual to return home or move to another appropriate residential setting. The short-term unit is staffed 24 hours per day with a minimum staff-to-client ratio of two-to-four during waking hours. The unit can accommodate four clients at a time. To the extent feasible, clients maintain their school or day activity programs while on the unit.

Referrals

Referrals are made by county case managers. Priority for services is given to individuals from the SSP's five-county service area. When possible, outreach services (in-home) are promoted as the first option. As advised by other providers of crisis prevention and intervention services (e.g. Beasley et al., 1992; Davidson et al., 1995), the SSP's home facility receives direct funding so that there is no fee for outreach services and individuals can access these services regardless of their insurance coverage or ability to pay. Crisis unit clients must have Medicaid or other financial

resources to defray the cost of these services.

Provision of Services

Outreach and crisis unit services are provided in three phases: 1) assessment; 2) intervention/training (including the development of a Crisis Prevention/Intervention Plan); and 3) follow-up. The foundation of the format for the assessment and intervention process is based on instruments and format designed by the Institute for Applied Behavior Analysis (Willis, LaVigna, & Donnellan, 1993; LaVigna & Donnellan, 1986; LaVigna & Willis, 1995).

Assessment. Assessment is designed to be brief, but intense, so that preliminary recommendations can be developed and presented to Interdisciplinary Teams (IDT) within one week of service commencement. Assessments are conducted by a behavior analyst and a psychiatric nurse. The assessment includes individual and group interviews with family members and service providers, a records review, and direct observation of clients in their home and day program. The team uses both verbal and written formats for gathering information relevant to each individual's situation. Topics covered include social interaction and communication, medical, mental health, personal preferences, reinforcement histories, and a functional analyses of the target behavior(s). The team draws on various interview/assessment tools, including the Motivation Assessment Scale (Durand, 1988), the Functional Analysis Screening Tool (Iwata, 1995), the Problem Behavior Inventory (Willis & LaVigna, 1989), and functional analysis methods developed by O'Neill, Horner, Albin, Storey, and Sprague (1990).

Intervention/Training. Recommendations for intervention and training are then presented to the client's IDT. These include the following: a) proactive strategies; b) environmental or ecological modifications; c) reactive/emergency strategies; d) staff/careprovider training; e) data collection; and f) follow-up.

The subsequent intervention and training strategies used are determined by the input of individuals' IDT. Intervention strategies concentrate on the development of alternative social skills, communication competencies, and environmental modifications which may alleviate particular behavioral situations. Often additional recommendations are received from the consulting psychiatrist and psychologist. Referrals are made to other medical specialists or to communication specialists.

Reactive strategies are also devised to nonaversively intervene in the occurrence of challenging behavior. Individualized crisis prevention plans are developed to assist families and service providers.

In accordance with Minnesota regulations, procedures such as seclusion and faradic shock are prohibited. Certain other procedures (e.g. exclusionary time out, room time out, manual restraint, mechanical restraint, restitutional overcorrection, etc.) are also limited and strictly controlled by Minnesota regulations. The SSP teams generally do not recommend these strategies be included in a Crisis Intervention/Support Plan. However, some emergency use of controlled procedures (e.g. manual restraint to prevent a person from harming himself or others) may be indicated as part of a Crisis Intervention/Support Plan.

Full results are likely to require multielement treatment plans, the various components of which, in combination address the full range of outcome requirements (LaVigna, Willis & Donnellan, 1989).

On-going consultation regarding the implementation of specific interventions is provided. This may entail verbal and written instructions, modeling, and role-playing exercise. When possible, the SSP either directly or via other specialists in the community provides educational materials and training on specialized issues (e.g. communication strategies, autism, sensory integration, particular psychiatric diagnosis, etc.).

Follow-up. The SSP team follows clients for one year from service commencement. Contact is made on a weekly or bi-weekly basis depending on the needs of individuals and the wishes of their IDTs. Throughout the remainder of the year the SSP maintains quarterly telephone contact with service providers, families and county case managers. They may also make in-home visits and attend IDT meetings. Follow-up enables the SSP to keep informed of the client's adjustment following discharge and offer further assistance.

The foundation of the format for the assessment and intervention process is based on instruments and format designed by the Institute for Applied Behavior Analysis.

Between April of 1993 and December of 1994, the Special Services Program provided services to 76 clients. An additional 24 individuals were denied services during that pe-

riod either because the SSP crisis unit was full, the wait for services was considered to be too long by their IDTs, or they were not from the five-county area. These individuals served as the comparison group when calculating the estimated service outcomes and expenditures.

To compile the characteristics and service histories of SSP clients, a detailed record review was conducted using information gathered at intake. Additionally, follow-up data on service changes and other concerns was collected via quarterly phone contact with case managers and primary careproviders of persons served in 1993 for one year following completion of SSP services. Analysis of the cost effectiveness of the SSP was performed through an estimation of service expenditures in the absence of the program. Case managers of the 76 clients identified what would have most likely happened to each individual had the SSP not been available. This was based on their experience and knowledge of the service options available prior to the development of the SSP. Estimated cost of these outcomes were computed using current average costs from the payment files of the Minnesota Department of Human Services. These alternative scenario cost estimates were then compared to the prorated development and operational costs of the SSP.

Results

Participants

Diagnostic Characteristics. The most common behavioral concerns at the time of initial referral included: physical aggression toward other persons (71%); verbal aggression (50%); property destruction (26%); and self-injurious behavior (21%); with non-compliance, running away, and theft each being mentioned for at least 10% of individuals. More that three-fourths (82%) of all clients had a psychiatric diagnosis, including most frequently schizophrenia or other psychotic disorders, personality disorders, affective disorders, and impulse control disorders. Figure 1 displays these characteristics graphically.

Demographic Characteristics. The ethnic representation corresponded roughly to the ethnic composition of the Twin Cities metropolitan area. Clients ranged in age from eight to 67 years, with an average of 29.6 years. A quarter of clients were less than 17 years old. Sixty seven percent of the clients served were male.

Service History. Seventy five percent of the 16 clients served in the crisis unit were initially placed out of their family homes by the age of 16, as compared with 54% of outreach clients.

Outcomes

Table 1 compares residential situations of those clients referred in 1993 to their situation at the end of 1994.

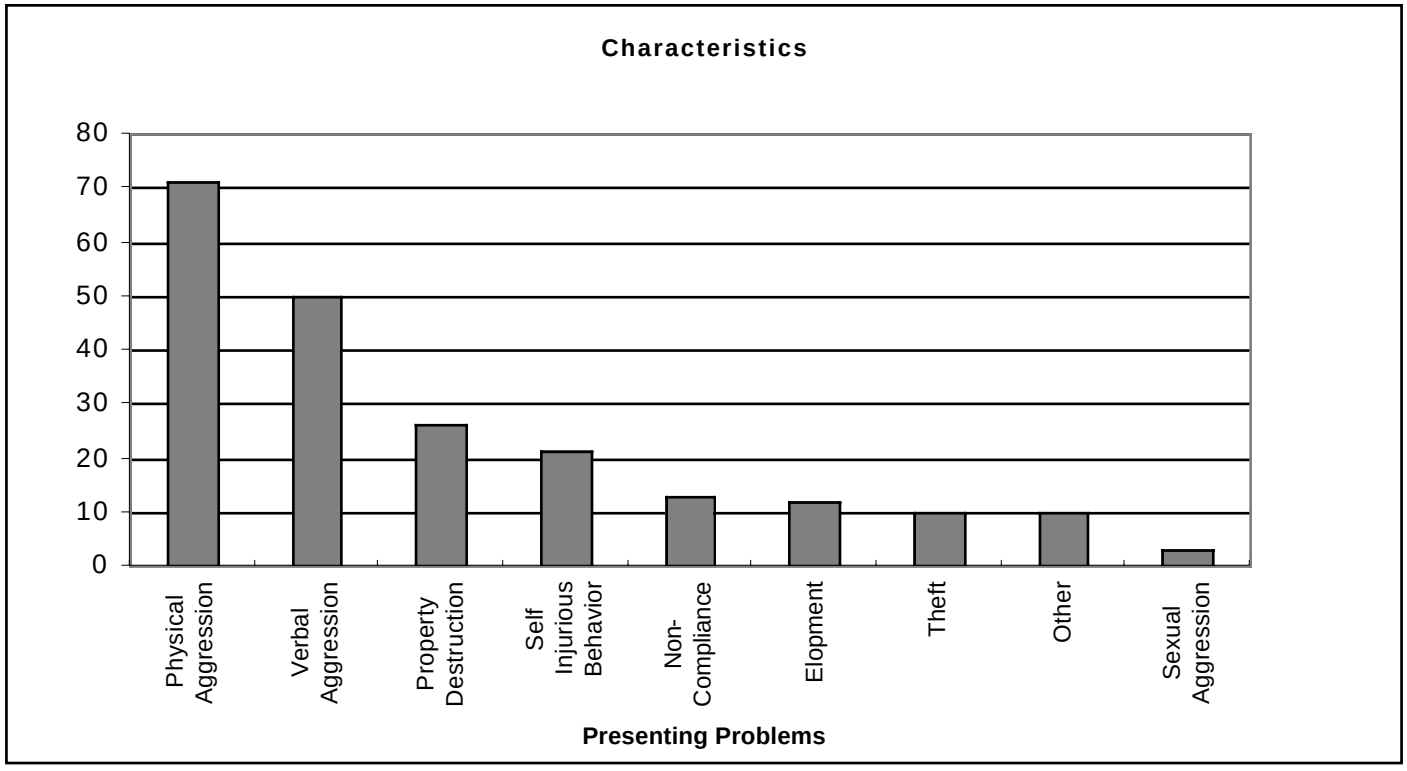

Figure 1. Behavioral and psychiatric problems at time of initial referral for SSP services (N=76). May be more than one presenting problem per service recipient

Fifty eight percent of the clients served through outreach services remained in the same residential setting throughout 1994 as they had been at the time of initial referral in 1993. This compares with 25% of crisis unit users. Sixty percent of the individuals who were unable to access SSP services did not change residential settings. For five of these six individuals, additional in-home supports were secured.

As can be seen in Table 1, only one of the 24 individuals who received SSP services in 1993 was placed in a state regional center in the following year, whereas four of the ten individuals unable to access services were placed (three on a long-term basis and one on an interim basis).

Satisfaction - Careproviders. Satisfaction was measured using a five-point scale. Post-service telephone interviews were conducted with 32 primary careproviders of persons receiving SSP services in 1994. Fifty-six percent rated their overall satisfaction as "very high" and 44% rated it "high". Four-fifths of careproviders gave staff "very high" satisfaction ratings. Careproviders frequently volunteered being impressed with the "nonthreatening" and "non-judgmental" approach of the staff.

Different concerns were noted by careproviders. Four (20%) of the careproviders interviewed thought SSP staff would have developed a more "realistic" picture of specific behavioral issues with additional and longer visits. The concern by 25% of careproviders of persons placed in the crisis unit was that day activities were insufficient.

Satisfaction - Case Mangers. Of the 46 case managers responding, 63% rated their satisfaction with service outcomes as "very high" and 37% rated it "high".

The primary dissatisfactions of the case managers revolved around the time lapse between referral and initiation of service. The 90-day placement limit for crisis unit services was too short to develop new residential programs for people who were unable to return to their pre-SSP settings.

Cost Effectiveness. Estimates of the cost effectiveness of the project were based on projections of the most likely service disposition for each SSP client in the absence of the program. These projected outcomes were obtained through interviews with each client's case manager. Dispositions were stated in terms of residential and other support services and their probable length (e.g. increased or decreased hours of case management, psychological services, etc.). Expenditures were estimated based upon average costs for those services in the metropolitan area.

They were limited to a 90 day period from referral because of lower reliability of longer projections.

Case managers projected that 27

Cost Effective

Total Estimated Service Expenditures in Absence of SSP Operation in 1994	$722,320
Total Expenditure for Developing and Operating SSP and its Physical Space in 1994	$435,148
Total Estimated Reduction in Total Expenditures	$287,172

Table 2. Comparison of Expenditures for Developing and Operating SSP and Physical Space with Estimated Expenditures in its Absence in 1994

	Outcomes					
	Same Residence	New Community Residence with Less Structure	New Community Residence with Similar Structure	New Community Residence with More Structure	From Family Home to Community Residence	State Institution
Outreach Service Recipients (N=12)	7	0	2	2	0	1
Crisis Unit Service Recipients (N=12)	3	3	1	0	5	0
Service Referrals not receiving SSP Services (N=10)	6	0	0	0	0	4

Table 1. Residential Situation at End of 1994 As Compared to Residential Situation at Time of Initial Referral for SSP Services in 1993

of 54 individuals completing SSP services in 1994 would have been placed on a short-term basis (90 days or less) in a state regional center. The total costs projected for persons who were served in the crisis unit had the unit not been available were $414,619 or $20,731 per person.

Expenditures of $307,703 or $9,050 per person were projected for persons served off-campus had those services not been available. Therefore, the average projected alternative expenditures for all SSP participants were $13,376 per person.

In 1994, total expenditures for SSP operations were $435,148, including $26,553 for 1,308 resident days on the crisis unit (89.6% of full capacity). The net projected expenditures for SSP participants in the absence of the program were $722,320. Based on projected expenditures for alternative services and established costs of development and operation of the SSP in 1994, costs for SSP clients were $287,172 less than the costs of services that would have been used in the absence of the SSP (i.e. $722,320 - $435,148; see Table 2).

Validation. While it seemed clear that there were no better sources of projected outcomes for individuals in the absence of the SSP than those individuals' case managers, it also seemed important to validate their projections. This was done through follow-up on 14 individuals who were unable to access SSP services in 1994. Because these unserved individuals were similar to those clients served in the SSP, their actual experiences were used to test the accuracy of the case managers' projections of what would have happened to individuals actually served by the SSP had the it not been available. Analysis of actual outcomes for these 14 individuals demonstrated that one half actually were admitted on a short-term basis to a state regional center, while one was placed in a psychiatric hospital.

These expenditures yielded a per person average estimated expenditure of $13,273 (in the absence of the SSP). This compares with the average alternative expenditure of $13,376 for SSP participants. These similar amounts provide strong support for the assumptions of the case managers' projections of likely service scenarios and expenditures in the absence of the SSP.

Discussion

Throughout the course of providing crisis services the extensive needs of individuals and the gaps in the present service system have become obvious. While the multielement approach to assessment and intervention has been a comprehensive and effective means of producing change, it is clear that much time is necessary to accomplish the task with limited resources. As illustrated by the satisfaction survey results the clients and their careproviders expect high quality supports and services from the system.

Although the SSP is limited by its resources, the project demonstrates the need for community-based support before a deterioration in behavior lead to more costly and restrictive services.

Also of concern is the current system's inability to provide adequate supports to prevent repeated residential moves. While crisis unit services were highly thought of, it is not acceptable for temporary placements to be extended or repeated. In June 1995, the Legislature authorized a proposal to further develop programs making behavioral supports and crisis response services available throughout Minnesota. These programs began operation later in 1996. Implementation of this statewide network of behavioral support and crisis response will help to assure a permanent place in the community for all Minnesotans with developmental disabilities. In this regard, a seven-county metropolitan area coordination effort to further expedite and develop crisis services is in process.

We encourage other providers to develop service outcome and cost-effectiveness studies so we can more fully understand the dynamics of crisis prevention and intervention services.

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Continued from page 1

- Are the beliefs or philosophies of the mediators consistent with those that form the foundation of our recommendations?
- Do the mediators have the physical and staffing resources to carry out the support plan as recommended?
- Are there barriers (e.g., emotional, social, financial, work-related) that might preclude the mediator from carrying out our recommendations?
- Do the mediators have the training and knowledge necessary to implement the recommendations; and if not, how much and what type of training will they need?
- What additional resources and services are necessary for the plan to be carried out successfully.

Answers to these questions may not be straight forward. While some might be answered through very direct and specific questions, the Mediator Analysis involves reaching conclusions as to whether there may be one or more mediator characteristics that may act as barriers to the consistent implementations of the recommended support plan. These conclusions may be based on information derived from a wide variety of sources reported elsewhere in the behavior assessment and functional analysis or may be based on information specifically gathered and reported as part of the mediator analysis itself. For example, a mediator is unlikely to say "I am unmotivated and I won't cooperate," although this does happen on occasion. We might infer the mediator's motivation, however, from how the person presents themselves, the "excuses" the person gives for not being available, etc. A mediator may be unwilling to say "I am overwhelmed." It might only be evident from the person's emotional expression during an interview (e.g., tears), or in comments such as "Sometimes I just want to run away and not come back." "I wish I was never born."

Most parents and teachers don't come right out and say (some do) "I don't believe in this positive stuff, I believe in firm discipline." But we may get a good understanding of potential philosophical conflicts when we begin addressing child-rearing methods (which we might describe as part of the person's family background) and/or behavior management strategies (which we might describe as part of the consequence analysis). For example, when talking to parents we will ask about how they might manage their child's behavior. We will even ask about hypothetical behavior problems. At the end of our questions, we may come away with the impression that the parent(s) rely heavily on aversive methods. In some cases, the parent might say things like "I've tried those (positive strategies) but they didn't work. The only thing that seems to work is taking away his _____."

As we talk to staff and teachers, they may not be willing to come right out and say things like "He is disgusting." Rather, this might be inferred from their expressions. They may say things like "It is hard to work with him when he _____."

Information for the Mediator Analysis is gathered in a variety of ways, including direct observation, direct interviews, attitudes of those being interviewed, written records, expressions, statements from the consumer, etc. The Behavior Analyst must be sensitive throughout the behavioral assessment to potential barriers; actions, attitudes, philosophies, resources, etc., that might interfere with the implementation of recommendations. In the following pages, we present different points of focus for a Mediator Analysis that might help

answer important mediator questions.

Some people feel that they can't honestly and fully report the results of their mediator analysis because it will insult the mediators and/or create a negative reaction that itself can be a barrier to implementation. We have learned that the results of a mediator analysis should be provided descriptively rather than judgementally and, where ever possible, described from the mediators' point of view. For example, in carrying out an assessment in a group home setting, we became aware that the staff simply did not want to work with the focus person any more. To report this as a negative judgment of staff's professionalism would not have been productive. Rather, we reported this finding from their point of view, i.e., that they were feeling that the other residents of the home had not been getting a fair share of their time and therefore staff felt that they could not fairly give the focus person the attention he would need without further depriving the other residents. Accordingly we recommended a time-limited, intensive support team to implement the early stages of the plan in order to give the primary staff some respite. As a result, the person's placement was saved, primary staff recouped and, at their request, eventually took over responsibility, and the person's challenging behavior was resolved along with a major improvement in his quality of life.

We have learned that the results of a mediator analysis should be provided descriptively rather than judgementally…

Some of the following illustrative examples describe parents as mediators and some describe staff as mediators. You may want to keep in mind that these issues have their parallel counterparts. That is, if the example is referring to parents as a mediator, you should consider how the issue would manifest itself with staff. Conversely, if the example is referring to staff, you should consider how that same issue might manifest itself with parents.

Some Focus Points for a Mediator Analysis

A. **Motivation.** The Mediator Analysis begins with information about the referral; "Who made the referral?" Research in rather clear in this area, people/families who are self-referred or referred by individual professionals, rather than by an agency, show better outcomes (Gaines & Stedman, 1981; McMahon, Forehand, Griest, & Wells, 1981). So, we might ask "Why are you here?" "What brought you to need this assessment?" "How did you come to be referred to _____?" Lack of motivation for the assessment and subsequent treatment may be reflected in answers such as "My social worker said I should come." "The court said I won't get my kids back if I don't take a class." "I really don't have a problem, but the school said I needed to get some help for my child."

Answers such as these may reflect poor motivation. More importantly, the lack of motivation may be reflected in poor outcome, but also wasted cost and professional time (e.g., missed appointments, late appointments, incomplete assignments).

B. **Expectations Surrounding Behavioral Services.** The expectations that people have about the nature of behavioral services may be counter-therapeutic. Many people view treatment as taking the child or adult to the counselor or psychiatrist to be "fixed" or "cured." Behavioral services (e.g., parent training), on the other hand, requires that the participants or mediators take an "active role." Participation may include observation, mastery of educational materials, helping a team develop and revise support plans, attending weekly/monthly training or team meetings, summarizing data, frequent telephone contacts, etc. The demands for active participation in the process of providing behavioral services may determine whether people agree to participate or not; and may have an impact on who persists and who drops out (Kazdin, 1985).

In the Mediator Analysis it is important to determine the expectations the mediators have regarding behavioral services or training. There is every reason to believe that if they begin with the WRONG EXPECTATIONS the outcomes will not be positive. For example, Baekeland and Lundwall (1975) identified a number of factors that were associated with participants dropping out. Lower socioeconomic status was one of these factors. They suggested that this might reflect a **conflict** between the client's expectations and the values and expectations of the specialist.

One way of resolving the problem of people dropping out be-

cause of unrealized or conflicting expectations is to lay out the expectations for them so that they can make decisions about whether they want to or can participate effectively with the recommendations. This is frequently done in the form of an Informed Consent and Service Agreement in which the expectations are listed in writing and the mediator is asked to indicate their agreement or disagreement to each item. Prior to the initiation of behavioral services, there may be negotiation around the expectations. Agreement should be reached prior to service initiation. If agreement cannot be achieved, then alternative resources or services may be suggested.

C. **Parent and Family Risk Factors.** Not every parent or family may be candidates for parent training. The literature is replete with research describing Risk Factors associated with poor outcomes. Some of the risk factors described in the parent-training literature (Patterson, 1974; Reisinger, Frangia & Hoffman, 1976; Strain, Young, & Horowitz, 1981) include:

- families with father absent
- lower socioeconomic status
- marital discord
- greater parent psychopathology

Wahler and colleagues (Wahler, Leske, & Rogers, 1979; Wahler, 1980) have conducted extensive research related to factors that might influence the outcome of parent training and behavioral services. The High-Risk factors they identified included:

- families with the father absent
- lower socioeconomic status
- poor education
- live in crowded and high-crime area
- living at the poverty level

Their research showed that high-risk families were more likely to discontinue behavioral services, and if they continued, they required 50 percent more training and consultation than other families before they achieved satisfactory performance. More importantly, their data failed to show significant gains as a result of parent training on the part of high-risk families.

In our work with families, the two factors that have sometimes appeared to impede progress have been those families in which there is only **one parent or where there is marital discord**. These factors, therefore, are risks that should be identified and addressed as part of the mediator analysis.

Single Parenting. Parenting is difficult enough when there are two parents. But consider a family in which there are two or three children, one child with serious behavioral challenges, and only one parent. The stressors of parenting are compounded logarithmically. When we do an assessment we must attempt to determine whether the parent can do what we ask given the stresses of single parenting. We would attempt to determine whether additional supports are available in the home, and the level of support available through extended family, relatives, friends or agencies.

Even the degree of social support is important when it comes to the outcome of parent training. Wahler (1980), after extensive research of the effects of parent-management training concluded that the effects of parent management training may vary as a function of a parent's social contacts outside of the home. In their research Wahler and colleagues noted that after mothers had positive contacts outside of the home (e.g., with friends) they were significantly less aversive at home in their interactions with their children.

From a treatment utility perspective, this means that our recommendations and suggestions may not be effective under conditions where the parent does not have the necessary supports available inside or outside the home. If we are to be successful with single-parent families, then it may be necessary to help them find or develop the proper support systems, such as:

- Singles groups
- Baby sitting so they can go out
- Support group for parents with children who
- ETC.

Marital discord is surely a risk factor. There may be arguments over many issues that erupt into yelling, screaming and sometimes physical altercations. Sadly, these disagreements frequently occur in the presence of the children and may represent Setting Events that influence the child's behavior now, later and across settings. Our experience has been that when the parents are having significant interpersonal difficulties, they frequently disagree and argue about and over the children. They disagree about the nature of the prob-

When we do an assessment we must attempt to determine whether the parent can do what we ask given the stresses of single parenting…

lem, who is responsible for the problem and how to manage the problem. Unless parents can come to some agreement, it is unlikely that they will agree on how to implement the recommendations of a consultant or trainer.

Needless to say, if something is not done to resolve the issues, it is unlikely that the behavioral support plan will be effective.

Our assessments often determine that previous behavioral services did not take broader family issues into account and their possible impact on outcomes. The assumption seems to have been that these don't matter and the family will pull together to do what is right. This "putting on the blinders" approach is a waste of time and resources. For behavioral services (e.g., parent training) to be effective, explicit efforts may need to be directed at resolving some of the discord existing between the parents either before or during services. Griest et al. (1982), for example, investigated the effects of dealing with parental relationship issues on the outcome of parent training. They compared the effectiveness of various forms of parent management training (e.g., traditional parent training alone, and parent training plus discussion of family relationship problems (e.g., parental personal adjustment, marital adjustment, parent perception of behavior, extra-family relations). Both groups showed significant improvement over a no-treatment control group. But at a 2-month follow-up, improvements were maintained significantly better only in the group in which parent and family problems were addressed. The result of this study suggest that **successful treatment of a child's behavior problems may require explicit consideration of and attention to the interpersonal context in which the behaviors occur**.

Therefore, as part of a Mediator Analysis questions and exploration needs to focus on the conflicts in the family that might preclude effective implementation. Some specific questions that might get at these issues include the following

- How are you and your husband getting along?
- Do you have open arguments? What do you argue about?
- Do you agree on how to manage your child's behavior? On what do you disagree? Agree?

We may be able to get at the answers to these questions by asking parents to describe the methods they use to manage the child's behavior, to describe what works and what does not work, to describe what they do as a family, and to describe why they think the behaviors occur. Based on these descriptions, we may be able to identify unstated disagreements and difficulties.

Disagreement Around the Focus of Behavioral Support. The likelihood of our recommendations being carried out by parents or staff may be a function of the degree to which they agree on the **problem** that is causing them the most difficulty. One parent may feel that refusal is the big problem, while the other may feel the child's tantrums are the most disturbing. What is the likelihood that the things we recommend will be carried out if there is no resolution of their disagreement? The same disagreements might exist between staff, between staff and supervisors, between staff and administrators, and between administrators and consultants. Indeed, staff bickering is one of the most frequently cited reasons in agencies for plans not being carried out as they have been recommended.

In the Mediator Analysis, we attempt to identify disagreements that may interfere with consistent implementation. Subsequently, we attempt to resolve these conflicts. This may be through explicit negotiation with a funding agency. It might involve reframing the focus from an objective, assessment-based, position. If might involve satisfying everyone by prioritizing for foci or addressing all of the concerns at the same time. Needless to say, if something is not done to resolve the issues, it is unlikely that the behavioral support plan will be effective.

D. **Emotional Resources.** Sometimes those who work with people who have challenging behaviors get to the point that they **can simply do no more.** A question that needs to be answered is whether the mediators have the **emotional resources** to carry out the recommendations. We have heard people say things such as "I am at my wits end." "I just don't know what I will do if he does it again." "I've just had it." Statements such as these suggest that the person's **emotional resources** may be at an extreme low ebb and may not be able to do more. This means that they may not be able to carry out recommendations consistently or at all. Indeed, making certain rec-

ommendations, without considering the person's emotional state, may push the parent or teacher over the edge, to the point of resorting to severe management techniques or to the point of premature placement or expulsion from the school program.

The does not mean that a behavioral support plan cannot be effective. Rather recognizing that people **do not have the emotional resources** we may need to suggest separate services or supports for the parent or staff. We may even recommend the temporary infusion of resources into the setting to give the mediator a respite. This might come in the form of respite services, in home intervention, before and after school services, all designed to reduce the amount of stress experienced by the parent.

E. **Physical Resources.** Many of the people we serve are extremely aggressive; they are large and when they hit there is a very real potential for injury. The question we need to answer is whether the mediators have the **physical resources** to carry out the recommendations? Can they keep the client and themselves safe during an episode. Here is an example that illustrates this point:

We recently conducted an assessment for an 11-year-old boy with brain injury who manifested physical aggression and self injury. The self injury was of major concern because it involved gouging his eye, stabbing himself with sharp objects in the forehead, and extracting his own teeth. At school, he was supported by two, full-time aides throughout the day. At home, his mother was frequently alone with him while dad was traveling. Of course, everybody agreed that he should NOT be allowed to self injure. A number of strategies had been recommended, but evidence suggested that over 80 percent of episodes of self injury required physical prevention and subsequent prone containment until he regained control. We found that at school, physical containment sometimes required up to four individuals.

The boy's mother explained that she was PHYSICALLY incapable of preventing his self injury. In lieu of this, she would give in and capitulate early to prevent injury or serious damage. But this did not guarantee that all self injurious episodes would be prevented. Indeed, once he was self injurious, she did not attempt to stop him; rather, she would wait for a period of time and hope that he did not do serious damage to himself.

Unfortunately, his mother had been criticized by the school as noncompliant and uncooperative for not setting limits and holding to these limits. What they did not realize is that she was physically incapable of stopping self injury once it began; which would be the outcome of setting limits with her son. Our Mediator Analysis showed rather clearly that the boy's mother could NOT KEEP HIM SAFE if and when physical control became necessary. Further, in a circumstance when it was important for her to set limits and hold to these limits, she could only enforce the limits through physical means; which she was not able to do. Consequently, we recommended that two support staff be provided in the home setting during his waking hours.

making certain recommendations, without considering the person's emotional state, may push the parent or teacher over the edge…

In another example, a young man was referred to us because he had not been in a day program since he left school at the age of 22 years old. He was in his mid-40's. The purpose of the referral was to design a support plan that would gradually introduce him into a local workshop. Our assessment showed that he weighed more than 200 pounds and had tantrums that included physical aggression. Our assessment also showed that his mother had been injured in the past as a result of his aggression. During the assessment, his mother said that she would "do anything to help her son." Our concern was that she was in her 80's and that even minor frustrations might trigger further aggression. We were concerned about her safety carrying out the plan. She simply did not have the physical abilities to "keep herself safe." As part of our support plan we recommended that he have the opportunity to live in his own apartment (i.e., supported living). But in the meantime we recommended that support staff provide services in his parents' home until a supported living arrangement could be established.

When we make recommendations, we need to consider whether the people who will be asked to carry out the plan have the physical attributes to carry out the plan. Are they fast enough to catch the person if he runs? Can they physi-

cally prevent a person from entering the street or leaving the safe area? Can they effectively physically contain the person if he engages in severe self injury and this is a necessary reactive strategy? In other words, in the Mediator Analysis we need to address the best physical match between the support staff and the person we are evaluating.

In many cases, it seems that their meaningfulness as people is indistinguishable from their children's disabilities and behavior challenges.

F. **Secondary Gain.** We sometimes mistakenly conclude that "everyone will do what is best for the person they are serving." We believe that the parent will reliably attend classes on behavior management; we expect the owner of a group home will insure that support plans are carried out consistently so that children can move back with their parents; and we are sure that the 1:1 aide will do everything in his/her power to help improve the person's behavior and to reduce the service. We often fail to recognize that parents, teachers, staff, and administrators MAY HAVE GOOD REASONS FOR THE PERSON NOT IMPROVING. In other words, there is a "secondary gain" or benefit if the person doesn't improve. As part of our Mediator Analysis we attempt to identify possible benefits that might be accrued if the person fails to improve, which might act as a barrier to full implementation.

Scapegoat. Tharp and Wetzel (1969) talked about "The Needed Scapegoat." They wrote: "If the pre-delinquent child provides the focus for family disharmonies, and simultaneously is the screen for them, the family will resist changing its pattern of consequation because the child's improvement is punishing to the mediator." In other words, the child's behavior provides a social focus and deflects attention from the real problems in the family. If this is suspected, we must recognize that behavioral services may not be effective until the family problems have been resolved. As part of a complete behavioral support plan, we would recommend that the parents/family participate in family counseling. We may go so far as to suggest that the family receive counseling prior to providing services focused on the child.

Social Value and Rallying Point. Have you ever sat with a group of staff in a lounge and listened to their conversations about the people they serve. It would not be unusual to hear one or two staff comparing their clients/students and their behavior problems in a one-upmanship manner. For some, having the WORSE ACTING clients is a badge of courage to suggest that they are able to do what no other can do, that they are unusually competent. During assessments we have heard staff say "I'm the only one who knows how to work with _____," or "No one knows how to handle him like me." Indeed, we have experienced situations where staff do not follow our recommendations because they feel we "Don't really know what he is like," or "Don't really know Fred."

We need to be sensitive to the possibility that a resident/client might not be improving because improvement might reduce the person's value or worth in the eyes of his/her colleagues (i.e., She/he no longer has the worse acting clients).

Over the years, we have worked with a number of families where the problems of a child are a "rallying point" around which family, friends, and agencies provide attention, social contact, emotional support, financial support, and services. Because of the child's EXTREME behavior challenges, the parents spend a majority of their waking days attending meetings, working with advocates, organizing causes, attending therapy sessions, and talking to friends and family about HOW HARD IT IS. In some cases, the child's behavior challenges may be the only source of social contacts outside the home.

We have worked with some parents who, for most of their adult lives, have stayed at home to care for their disabled children, now adults. Their children have been their lives, their focus, and their vocations. In many cases, it seems that their MEANINGFULNESS as people is indistinguishable from their children's disabilities and behavior challenges. It also seems that their feelings of self worth and belongingness to the family are closely tied to their children HAVING BEHAVIOR CHALLENGES.

Given these scenarios, the Mediator Analysis must ask (based on the information we have accumulated) "Is there a possibility that the parents/teacher/staff would 'sabotage' the support plan in an effort to 'safe face' or to insure their meaningfulness in the eyes of significant others.?" If the answer

is "yes," then the support plan may need to specifically address increasing the mediators interests outside of the person's behavioral challenges. In instances where we are talking about staff, teachers, consultants, we may recommend changes to break the interdependence.

The Glue That Holds Them Together. Some families may resist recommendations for out of home placement or move into the community for their children/adult-children, even though the problem is extremely serious and a change is necessary and/or appropriate. They may resist such recommendations out of fear that once the child is out of the home, the family will disintegrate.

One or both parents may recognize that the family remains together only because of the problems manifested by the child. For example, several years ago, this scenario played out in textbook fashion. We were providing services in the family home of a 16-year-old with the problems associated with autism. He manifested severe physical aggression and property destruction (average of 3 incidents per hour). Our services were designed to implement a support plan in the home setting until such time that a specialized service (group) home became available in the community (it took about a year). At the point of assessment and throughout the provision of behavioral services it was clear that the parents agreed on very little. Indeed there was some question as to whether they even liked each other. Their entire focus of life was around their son. About a month after he was placed, the parents separated (and eventually divorced). Clearly, without the "glue" of their son's behavioral challenges, the family could not stay intact.

As we conduct our Mediator Analysis, we need to address the possibility that our recommendations might not be followed because one or more members of the team are fearful that if the person improves, the family might not survive.

Financial Gain. There may be good financial reasons for a family or staff not to follow recommendations. Families may resist placement when there is no question that it is needed because they depend on financial support that the child or adult generates. This could be in the form of Federal or State Support (e.g., SSI, child support). Tharp and Wetzel (1969) recognized this as a problem in their description of Case #66.

> They described: "*Our staff strongly urged a widowed mother to call the juvenile authorities when next her daughter, Annie, sneaked out of the house at night. The mother was unable to do so, because this might have resulted in the daughter's being adjudicated delinquent. If the daughter were confined to a detention or correction home, the mother would have lost the pension which she administered for the daughter, and which was the family's major support. It was economically unfeasible for the mother to behave in her daughter's best interest" (p. 130-131).*

There is no easy answer to this problem. Until the problem is addressed, the therapeutically correct decisions may never be made. The answer is quite complex. It may involve placing the family in contact with other social service agencies. It may involve helping one or both parents find employment. It may involve infusing services into the home (e.g., baby sitting, respite care) so that the parents can get jobs. It may involve infusing services (e.g., before and after school services, weekend services) into the setting which reduces the financial reliance on the client's income.

G. **Philosophical and Attitudinal Conflict.**

The Need For Discipline. At IABA, we hold that it is not necessary to punish people to influence their behavior. We ascribe to a system of nonaversive, person-centered behavioral support (LaVigna & Willis, 1995). Not everyone holds our view. Some people argue that "punishment is necessary," and ascribe to the view "spare the rod and spoil the child." Some professionals argue that people with severe behavior challenges have the "right to treatment" with aversive strategies. Unless we change their minds, unless we are able to teach them a new view of people, the nature of their behavioral challenges and methods of support, it is highly unlikely that they will carry out our recommendations.

Until the problem is addressed, the therapeutically correct decisions may never be made.

Tharp and Wetzel (1969) discussed the conflicts that arise when working with some school systems when they wrote, "there is the steadfast disinclination to employ available positive control. There

are many reinforcers which might be used to stimulate academic performance and which incorporate imaginative arrangements for educational practice, creating a climate of positive motivation and experience. But this vision is a far cry from educational institutional practice. Thus, **even the limited and correctional use of positive reinforcement meets frequent resistance**" (p. 137). They noted that public education is "managed almost entirely through aversive control: suspensions, expulsions, ridicule, loss of hall-passes or library privileges, scolding, loss of varsity eligibility, and the like" (p. 137).

In the absence of "philosophical agreement," it is unlikely that…recommendations will be carried out.

In the absence of "philosophical agreement," it is unlikely that our recommendations will be carried out. Here are some examples of the philosophical conflicts around discipline we have experienced.

We have been working with an 11-year-old boy in an inclusive education setting. In the first two months of our provision of behavioral services he spent very little time in the class. Our support plan called for reinforcing him for approaching, entering and remaining in class as a first step. But school personnel, from the teacher to the principal, were obsessed with the concern that he would spend large amounts of time out of the class. They repeatedly asked "What are you going to do to get him into class?" They suggested that we discipline him for not going to class and also suggested that we MAKE HIM go to class; this despite evidence that physical intervention or punishment would SURELY result in physical aggression; and more concerning, stripping naked and running around the classroom or school yard. If he did these things, in their eyes this would be sure evidence that he does not belong in an inclusive education setting. If it were not for his advocates and the family lawyers, our worst fears would have been realized.

In another instance, we were providing 1:1 support for a young girl both in her home and at school. Her behavior had been so intense prior to our participation that she had been placed out of state in a residential school After a comprehensive behavioral assessment she was brought back home and services were initiated both at home and at school. One of the foci of the support plan was "going to school;" that is, she was reinforced for going and remaining at school. Our data showed clearly that she was spending significantly more time at school and her behavior was improving. But there were days that she would decide NOT to go to school. On those days, we had an alternative schedule including shopping, household chores, etc. We were unconcerned that this might be reinforcing her STAYING HOME behavior. We felt that the reinforcement for going to school significantly outweighed that for remaining at home. However, this was not sufficient for the girl's mother. She DEMANDED that when her daughter refused to go to school, she should stay in her room and DO NOTHING FUN. Despite evidence that her school attendance had improved dramatically in just a couple of months, despite reliable documentation graphically presented showing improved behavior, and despite evidence that keeping her in her room when she did not go to school would result in severe behavioral escalation and the need for physical intervention, the parents demanded that we take a disciplinary approach. We were never able to come to agreement on this issue. We chose to transfer and refer the behavioral services to an agency that would be likely to DO WHAT THE PARENTS ASKED.

Reinforcement As Bribery. The controversy over whether to use punishment or not is not the only point of potential conflict. Some parents and staff do not believe in the use of REINFORCEMENT They view it as "bribery," and see no reason for "bribing" the person to do what they are supposed to do. Some people may not reject all reinforcement, but may reject the idea of using a particular type of reinforcement; e.g., food, certain privileges. We have worked with parents who have the belief that if you use food as a reinforcement, the person will become a compulsive eater. (We have NEVER seen this side effect.) So, what is the likelihood that staff or parents will use reinforcement as we suggest if they believe that using rewards is bribery? Just about ZERO. If behavioral services to be successful, then we will need to either select other methods, or re-educate the people around the potential benefits of using positive reinforcement.

Interfering Beliefs. Beliefs about the person being served

might negatively impact people's ability to carry out recommendations. For example, staff after having been spat upon may say that the person "did it on purpose." In other words, they take it personally. It may be difficult for staff or parents to be positive or to deliver reinforcement to a consumer if they believe that the child is misbehaving "willfully," or the child "knows what he is doing." And some staff have difficulty with the idea of trying to teach people with severe to profound learning difficulties because they believe they are "too retarded" to learn. "Why try?"

Unless we are able to change the views held by parents/teachers/staff, it is unlikely that they will follow the plan or adopt our recommendations. It is the purpose of the Mediator Analysis to identify these philosophical/attitudinal impediments. Perhaps this can help explain why the person has not progressed. One purpose of the Mediator Analysis is to identify these problems up front so that we can plan to re-educate or suggest other alternatives.

There are many other beliefs that may intrude on the ability of mediators to carry out recommendations. In 1969, Tharp and Wetzel talked about "The Insistence on Equity." This is a major issue. Our experience has been that many support plans are not carried out effectively because staff, teachers and parents feel that ALL THE CHILDREN AND ADULTS NEED TO BE TREATED ALIKE. They need to follow the same rules and they need to experience the same consequences for their behavior. With these beliefs in place, it may be difficult to individualize support; but individualization may be the only way that behavioral services may have an impact.

Schools are notorious for holding these beliefs (codified in school rules). Students must be in class and they must not leave without permission and a hall pass. In class, students must sit and work for the prescribed time, and if they don't comply, they are disciplined. If a student has a tantrum or is assaultive, he must be suspended for a codified period of time.

Students with disabilities and who have Individualized Education Plans, are also held to the same standards and rules. Frequently, little recognition is given to the possibility that the person's behavioral challenges may be a reflection of his disability. For example, the student who is aggressive because he has no other way of communicating, the student who refuses to enter the class out of fear or because of a lack of tolerance for crowds, noise, etc., the student who strips his clothing off because this is the only way he is able to terminate the task or activity. While the field pays lip service to the concept of an Individualized Education Plan, it has been our experience that it is individualized only to the point that the RULES ALLOW.

As part of the Mediator Analysis it is important to identify the beliefs that might impede the implementation of a behavioral support plan. Solutions to these problems may be difficult. Identified up front, we may be able to re-educate the mediators; or we may be able to re-negotiate the rules to better meet the person's needs. Unless these problems are addressed, progress may be limited or nonexistent.

H. **Personal Emotions.** There are many personal emotions, dislikes or biases that may negatively influence the ability of people to carry out our recommendations. Ask yourself these questions, "Are there behaviors or actions performed by others that disgust you? Are there actions performed by your clients or students that make it difficult for you to work with them effectively?" Some common examples of personally disgusting behaviors include nose picking, eating snot, physical aggression, directed spitting (i.e., snorting a large amount from above the soft palate, projecting it in your direction and hitting you between the eyes), feces smearing, feces eating, public masturbation, genital touching (yours). For a variety of reasons some staff, teachers, parents have difficulty with certain behaviors, while not others. We have heard staff say, "I'd rather him hit me in the face and knock me down than spit in my face." Here is one example.

...many support plans are not carried out effectively because staff, teachers and parents feel that all the children and adults need to be treated alike.

A number of years ago, we assigned one of our most competent behavior specialists to conduct a behavioral assessment and begin services for a person who had a long history of feces smearing, among other behaviors. Little did we know that our behavior spe-

cialist had a strong aversion to the smell and sight of feces (others'). During the assessment, the behavior specialist was smeared with feces, at which point the specialist vomited uncontrollably. We learned several things from this experience. First, we learned it was not a good idea to ask this specialist to assess, treat, or supervise any clinical case in which the person had problems with feces smearing, feces eating, or simply having bowel movements in his pants. Second, we learned that given his revulsion, it was highly unlikely that this specialist could or would carry out a reinforcement program for the absence of the behavior, or would carry out toilet training; he simply would be unable to get close enough without vomiting. Third, we learned that likes and dislikes of particular staff need to be meshed to and with the behavioral challenges presented by the client. Not doing this would result in ineffective implementation; if implementation at all.

They may bear such anger and resentment toward the individual that they cannot begin to carry out our recommendations…

For some other people, they can't tolerate barrages of directed profanity and insults. Perhaps for moral reasons, they see it as wrong and consequently escalate as the person's insults become more personal. I would imagine that they DO NOT TOLERATE ANY FORM OF DIRECTED PROFANITY FROM THEIR OWN CHILDREN. We had a recent experience where this was the issue; it nearly resulted in the termination of the person from our services because no one wanted to work with him. We were providing services for a young man in his own apartment. Our assessment failed to identify that he had a history of directed profanity, insults, racial slurs as challenges that would need to be faced. Because of the potential severity of the behavior which was the focus of our assessment, he was provided with 1:1 support 24-hours-a-day. The problem appeared within about 2 months of initiating services. He began screaming profanities and threatening our staff hundreds of times each day. As staff described, he hurled at them every profanity and personal slur they had ever heard. Because we were unprepared for these actions, we neither selected staff on the basis of their tolerance for these problems, nor did we prepare staff for these problems. Staff reported anger, and several staff burned out at being verbally accosted and either quit or asked to be transferred to another apartment. Unfortunately, there was turnover of the entire support team, from direct care staff to supervisors. At one point the question was raised whether the client could be served in the community.

Our answer to this problem was an ecological one. Recognizing that his current support team was "burnt out," we reconstituted another team in one of our other departments. In addition, we prepared staff, seniors, and supervisors for what they were about to experience. The KEY was finding people WHO WOULD NOT TAKE HIS INSULTS, PERSONALLY. Of course other actions were taken, including the introduction of needed psychiatric and neurological services and revision of his support plan to focus on these additional behaviors. We learned that even the best staff and administrators may have limits.

For a behavioral support plan to work we must find a way of MESHING the challenges presented by the person with the INDIVIDUAL LIKES AND DISLIKES of the Mediators.

Anger is another feeling that can intrude on a mediator's ability to carry our recommendations. It may be insurmountable for some mediators. They may bear such anger and resentment toward the individual that they cannot begin to carry out our recommendations because they have reached the "last straw." At this level of anger, the mediator may not deliver prescribed reinforcement because they are unable to see something they feel meets the criteria; in other words, they may NOT BE ABLE TO SEE ANY GOOD GIVEN THE BAD.

This level of anger is not difficult to identify. It presents in the person's tone of voice during the interview. It presents in comments that may be disparaging and blaming. These emotions may present quite frankly in tears and anger as the mediator discusses the person and his behavior. Once identified, the question is What do you do about it? On the one hand, if we have the resources, we might change the mediators. We might suggest that a different teacher, aide or staff be involved with the person. In some instances, we may recommend that the entire instructional or other support team be changed; one that doesn't carry

the ANGRY BAGGAGE. But this is difficult to do in a natural home setting. The parents may not be able to "bail out." Here we might suggest ways of reducing the anger through providing additional resources (e.g., baby sitting or even an in-home support team [Donnellan, LaVigna, Zambito & Thvedt, 1985]) that separate the parents and child. We might also suggest counseling for the parents to help them deal with their negative emotions. Tharp and Wetzel (1969) suggested some other ways that anger might be mitigated. They wrote:

> "The technique here is to choose an original target behavior which is particularly annoying to the mediator. The immediate correction of the particular problem will thus be gratifying to the mediator and make his cooperation more likely. For instance, if a small child is annoying the teacher by getting out of his seat without permission, in addition to being bad on the playground, and is also underachieving in arithmetic, the strategy should be to focus initially on getting-out-of-seat. With that 'sandpaper' removed from the relationship between teacher and child, she will be in a better position to cooperate in consequating the full range of problem behaviors" (p. 133).

I. **External Constraints.** We pointed out at the outset of this article that many support plans are driven by a mistaken belief; that the plan can be carried out by the parents, staff, or teachers. In many instances, while the mediators may be motivated, they may not be able to carry out the recommendations effectively because of environmental constraints including insufficient time or financial resources; because of the demands for caring or teaching other children/adults in the same setting, etc. In other words, the demands of even a minimally acceptable support plan may exceed the abilities of the mediators to carry out recommendations (Kazdin, 1985). This is an extremely important issue since some research has shown that "external factors" (e.g., transportation, child care, work) are given as the reasons for dropping out in 55 percent of cases (Garfield, Affleck, & Muffly, 1963).

It is our role in the Mediator Analysis to identify factors that might negatively impact the mediators' ability to implement our recommendations, and to determine whether the plan can be realistically implemented given the evident constraints.

1. *Monetary Demands.* Some of the demands may be monetary. The families may not have the funds available to purchase reinforcers, or to hire baby sitters so that they can attend therapy or training sessions. Some families may not have transportation to get to and from the designated training locations. This does not mean that the families should not receive services; rather, it means that adaptations and modifications will be needed. For example, some programs have provided telephone resources, others have provided assistance with transportation, and child care (e.g., Horne, & Patterson, 1979).
2. *Too Much To Do and Too Little Time.* When we conduct behavioral assessments worldwide we frequently conclude that the previous recommendations were not implemented, not because people were noncompliant or unmotivated, but because they simply did not have enough time. Let us ask, how many of you parents or teachers could consistently
   - record every occurrence of self hitting that occurs at a rate of one incident per minute;
   - reinforce your child every 10 minutes with praise and a token for the absence of screaming;
   - sit your child on the toilet every 30 minutes for 10 minutes;
   - give attention every five minutes on a noncontingent basis.

   While these recommendations may be important; as good as they may be, they may not be realistic given the demands that exist in the setting.

   In the endeavor to determine whether there are constraints that would prevent the mediators from effectively carrying out the recommendations, we ask them to describe their work schedules, their other responsibilities, their social and

…while the mediators may be motivated, they may not be able to carry out the recommendations effectively because of environmental constraints…

political commitments. We describe to them the commitment of time we feel may be necessary and ask very specifically whether they feel they can do what may be recommended.

…we need to keep in mind … not all clients can be treated or supported under ALL conditions…

3. *Staffing Resources.* The ability of mediators to carry out our recommendations will depend on the number of OTHER PEOPLE for whom they are responsible. A parent who has one child with behavior challenges may be able to do a lot more than a single-parent with three other young children in addition to the target child. Staff of a group home with a 1:3 staff to client ratio may have difficulty carrying out recommendations (a) if there are several other children in the setting with severe behavioral challenges, (b) if the other residents require considerable hands on care and direct teaching, (c) if in addition to their client responsibilities, they have total responsibility for the care of the physical setting.

   Given these issues, as part of the Mediator Analysis we attempt to determine the other responsibilities of the parents and staff; the number other children/clients who have behavioral challenges and/or require care, and the level of physical care required by others in the setting. Given our findings, it may be necessary to recommend additional resources and/or to recommend the reorganization of the existing resources.

J. **The Behavioral Characteristics of The Person.** Whether a mediator will be able to carry out your recommendations will depend on the **rate, duration and severity** of the behaviors presented by the consumer. Something we need to keep in mind is that **not all clients can be treated or supported under ALL conditions.** Here is an example of the problem:

Gina is in her mid-thirties. She has problems associated with autism along with serious learning and communication difficulties. She had a long history of physical aggression and self injury. Our assessment determined that her physical aggression and self injury were largely (85%) due to the pain she experienced as a result of severe ulcers. When she would cycle through her ulcer, she would physically attack support staff over a period of 8 to 10 hours with very few breaks. Knowing this, at the outset of service initiation, we assigned 1:1 staff to support her. But it was not too long after beginning services that her staff complained that they were overwhelmed and could not effectively manage her behavior. After a period of troubleshooting (the clinical supervisor carried out the 1:1 support during a severe episode) the clinical supervisor concluded that her behavior was too severe, too intense and of such duration (with few if any breaks) that no single staff member could carry out the emergency strategies. As a result, during her cycles of severe behavior, two staff were provided. Staff would work with her no longer than 15 minutes before another staff member would take over. This would continue until the episode or cycle ceased.

So, when we conduct a Behavioral Assessment, the Mediator Analysis needs to evaluate whether the mediators can carry out the recommendations given the rate, duration, and severity of the behaviors presented by the person they are serving. Consider these examples:

- A 4-year-old boy participates in a preschool class with a teacher an aide and 28 other students. He runs or wanders around the class 30 minutes out of every hour. During this time, he hits and slaps his classmates on the average of 15 times during the same period. He seems to be doing it for the fun of it.
- An 11-year-old boy with problems associated with autism lives with his parents. He has profound learning difficulties along with high rate self injury. Our assessment showed that he would hit his head as much as 150 times per hour.
- A 16-year-old boy with problems of autism and some minor learning difficulties lives in a group home with five other boys. The home has a 1:3 staff to client ratio. He is reported to run away and escape at every opportunity (i.e., He attempts about every 20 minutes). When he gets away, it can take several hours of staff time to find him and return him home.

These examples are illustrative of situations in which the recommendations would need to address the mismatch between the mediator resources and the needs of the focus person.

K. **Organizational Structure.** We are frequently asked to conduct behavioral assessments for people

who are in group homes, sheltered workshops, or classrooms. At the end of the assessment, we make recommendations and suggest very specific strategies that might be used. We are frequently asked to consult on a regular basis with a program and to provide training around, evaluation and updating of our recommendations. In some cases, each time we return to consult, there is a new face, a new person we talk to or consult with. We find that one person has no idea what was recommended the last time and we have to reiterate what has already been said. This is frustrating to say the least, and totally ineffective at the worst.

One role of the Mediator Analysis is to determine who will mediate the recommendations. We attempt to identify the person or person's who will take the recommendations and do what is necessary to insure that EVERYONE knows what has been recommended, and who will SUPERVISE the implementation of the recommendations.

In staff operated programs, there needs to be a management STRUCTURE to support the provision of behavioral services. Indeed, Thompson and Grabowski in 1972 emphasized this point when they wrote "…enthusiastic support from high-level administrators is the single-most crucial factor in establishing a behavior modification program" (p. 272). In a critical review of staff management practices in institutional settings, Reid and Whitman (1983) concluded "…where their (direct care staff) performance has been less than adequate, it is primarily the reflection of the ineffectiveness of the management practices currently operating" (p. 146).

As part of the Mediator Analysis, we strive to answer questions such as those listed below:

- Who is the supervisor or manager?
- How often does the supervisor meet with staff?
- Is the supervisor supportive of staff?
- Is there a method of accountability present that will insure that recommendations are implemented?
- What needs to change in the organizations structure for the support plan to be implemented effectively?
- Who will have the responsibility for meeting with the consultant?

If necessary, we may recommend reorganization and/or reassignment of responsibilities, outside consultation, and/or changes to the management system (LaVigna, Willis, Shaull, Abedi, & Sweitzer, 1994).

L. **Intra-personal Issues.** There are many factors within the mediator that might intrude on his/her ability to carry out recommendations. For example, many staff and parents we have worked with over the years have learning difficulties or mental illness themselves. They may have difficulties reading and remembering what they read, they may have difficulties understanding what they hear in lectures and in-services because auditory processing problems, or English may not be their primary language. In some instances, the parent may have psychiatric problems (e.g., schizophrenia, obsessive - compulsive disorder) which may make it difficult for them to carry out recommendations. During interviews, we may recognize issues such as these. This may lead to some specific questions and probes to expose these issues. For example, we might give a parent a couple of paragraphs to read and ask them to answer some questions. Recognizing that the parent is having difficulty concentrating we might ask questions to get at a history of mental illness. We might explicitly ask whether the parent is receiving psychiatric treatment and for what reason. We might ask whether the parent has a history of mental illness for which they have received treatment. Surprisingly, the parents we have worked with are usually quite open and willing to discuss their problems.

Once the Analysis identifies these mediator issues, it does not mean that the person will not be able to carry out the recommendations. On the contrary, it means that we will need to recommend adaptations that will help the mediator understand what we recommend. We might recommend that programs be translated into the mediator's primary language or that it be explained by a translator so that they can better understand the recommendations. We might recommend multi-modality teaching for some staff who have difficulty learning in particular ways. We might recommend that plans be concretized in such a way that the schizophrenic parent can bet-

…it means that we will need to recommend adaptations that will help the mediator understand what we recommend.

ter understand it. We might recommend a gradual introduction of behavioral services in a step-by-step fashion so as not to overwhelm a parent who has a history of stress induced psychiatric episodes.

M. **Training Issues.** Training is a critical component of a support plan. All to often, the training of mediators is less than adequate or nonexistent at all. The consequence is that support plans are either not carried out or carried out inconsistently or incorrectly (Anderson & Schwartz, 1986). In the Mediator Analysis, we attempt to determine whether the mediators have the training and knowledge to implement our recommendations. We ask questions to determine whether training exists at all, as well as the type and extent of training.

It is important to understand, that if training exists, it is usually in the form of reading training manuals and policies, and in-service/workshop training. Unfortunately, these methods are least effective in teaching staff the skills they need to carry out individual support plans. This is very important when it comes to understanding parents also. As part of parent training classes, parents read manuals, listen to lectures and are expected to take the information home and use it with their children who may manifest very challenging behavior. There is very little evidence available to show that parents can take what they read and implement the strategies effectively at home; similarly teachers.

These methods create knowledge and understanding; they don't impart skills. For some, who are already skilled in the area, they may be able to implement what they have read because it is not a far cry from what they are already doing. If we want staff, teachers, and parents to carry out specific strategies, then other methods are necessary. We employ a method we have termed "Three-Tiered Training" (LaVigna et al., 1994). The basic steps of this training process include the following steps:

1. step-by-step description of each step of the strategy in the form of a written "procedural protocol";
2. the mediator reads, reviews the protocol and all questions are answered by a supervisor;
3. the mediator demonstrates that they understand the protocol either verbally or through a written test (i.e., they show verbal competence - tier one);
4. the mediator demonstrates that they understand the protocol by practicing the strategies described in the protocol with the supervisor or consultant, until they meet specified criteria (i.e., they show role-play competence - tier two);
5. the mediator is observed implementing the procedure and corrective feedback is provided (i.e., they show in-vivo competence - tier three).

As part of the Mediator Analysis, we not only evaluate the existing practice of training; but also we recommend the level of training that will be necessary to carry out the recommendations. It is our belief that unless the mediators are knowledgeable, unless they are properly trained and supervised, they cannot effectively carry out many of the recommendations that we make in our support plans.

Conclusion

In conclusion, we have tried to describe some of the considerations in performing a mediator analysis. Most of our comments were aimed at identifying mismatches between what a person may need and the mediator characteristics that exist. This article has not addressed, except for some isolated examples in passing, many of the strategies that could be employed to overcome the mediator barriers that may have been identified. That topic will be addressed in a future issue of *Positive Practices.*

There is obviously a relationship between a mediator analysis and the social validity, i.e., acceptability of a recommended support plan. In an earlier issue, Kushlick, Trower, and Dagnan (1997) described the use of cognitive-behavioral strategies to effectively deal with some mediator issues. The topic of social validity will also be further addressed in future issues, as it may represent the most difficult outcome to achieve under certain circumstances.

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THE IABA NEWSLETTER

POSITIVE PRACTICES

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Anger Management and Assertiveness Skills: Use of a Curriculum in Supported Living Services

William McLain, Tri-Counties Regional Center, Santa Barbara, California
Ellen Lewis, Institute for Applied Behavior Analysis, Los Angeles, California

Editors' Note: We are pleased to present this article by Bill McClain and Ellen Lewis describing an approach to anger management training for our IABA consumers receiving supported living services. Gary had an opportunity to attend one of these sessions on one of his field visits and was totally caught up in the process, as well as being very impressed in how the process engaged everybody who attended. Let us know if you would like more articles describing different aspects of our services.

Introduction

For the past few years staff at the Institute for Applied Behavior Analysis (IABA) in Ventura County, California have been facilitating "stress management" groups as part of supported living services (also known as Social and Community Integration and Participation, or SCIP) with adults who have developmental disabilities. These groups started as a variation of Personal Effectiveness Training (PET) (King, Liberman, Roberts & Bryan, 1977) sessions, which had been held regularly. It was observed that participants and staff were generally unmotivated to attend the PET groups. At the same time, many of the people participating in SCIP continued to demonstrate poor impulse control, aggression, explosiveness, and difficulty managing the stressors encountered while living and working in the community.

The first group started as an hour-long weekly session with three or four participants, one group leader and one or two support staff. Additional groups were started in other areas of the community because more people wanted to participate when they heard about or visited the original group. Interested staff persons were trained to run the groups. One group became quite large (seven to ten regular participants) due to the convenient location and effectiveness of the group dynamics. Locations were varied when possible in order to facilitate accessibility for as many people as possible.

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Editors' Note...

This year is turning out to be a busy one for us. We are fortunate to be engaged in a major, two-year training and consultation project in New Zealand. This is with Specialist Education Services, who are adopting our multielement behavioral model as well as the Periodic Service Review as part of their quality improvement system, and a number of adult service agencies as well. In addition, we are preparing for our regularly scheduled series of training programs in the United Kingdom this fall. We are very pleased to announce that the IABA courses we are offering in the UK will be sponsored by the Tizard Centre, University of Kent at Canterbury. The Tizard Centre is unparalleled in the role it has taken in advancing positive practices in the field of challenging behavior in the UK so we feel particularly honored to be sponsored by them. Finally, we are preparing for our Second IABA International Conference to Promote Positive Practices in the Field of Challenging Behavior. The conference will be in Orlando, Florida in January, 1999. We hope to see many of you there.

Gary W. LaVigna, PhD
Clinical Director

This issue of *Positive Practices* has three article. One has to do with the provision of social skills training within the context of supported living services. This article was co-written by Ellen Lewis of our staff at IABA and Bill McLain of Tri-Counties Regional Center. The second article is co-authored by Mick Pitchford who has published previously in *Positive Practices*. Mick and his colleagues report the use of videotape in their efforts to understand and solve the problems of a student. They demonstrate a good example of where a time consuming assessment was not necessary. Finally, Peter Baker in his article describes a graphic means of displaying the results of a complex analysis to staff. We hope that you enjoy this quarter's issue.

Thomas J. Willis, PhD
Associate Director

Gary W. LaVigna and
Thomas J. Willis, Co-editors

Rug Rats, Videos and the Use of Ecological Strategies in the Rapid Reduction of a Severe and Challenging Behavior Problem

Fiona Skinner, St. Andrews School, Derby, United Kingdom
Hilary George, St. Andrews School, Derby, United Kingdom
Mick Pitchford, Derby City Educational Psychology Service, Derby, United Kingdom

Editors' Note: We are the first to recognize that the resources do not exist to carry out a full behavioral assessment and functional analysis for every person who is referred for problem behavior. School systems in particular may assign caseloads to its psychologists and others with the responsibility that would preclude this time consuming process for every student. Rather, we say, the full assessment and functional analysis should be carried out, among other criteria, for those people for whom less time consuming efforts have failed.

In this article, Fiona Skinner, Hilary George and Mick Pitchford describe the use of videotape to facilitate the process of assessment and analysis. They make such a strong case that one might consider videotaping not just as a more time efficient alternative to a full assessment but, in addition, a possible additional tool in carrying out a full assessment. What do you think?

Introduction

Susan was an unhappy 12-year-old girl with mild athetoid cerebral palsy and severe learning difficulties who had recently transferred to a new school and had started to cause major problems to staff and children alike. Some of the reasons for Susan's distress were plain enough to see. The death of a grandparent, a neighbor, a pet and the death of Princess Diana had a profoundly unsettling effect on Susan as did the change of school. Susan's distress manifested itself in a number of ways but the one that we will concentrate on most was her assaults on staff and peers. In addition her lone parent mother reported major difficulties getting Susan to school and her attendance was also poor, making it difficult to help her settle happily into her new school or for her new teachers to get to know her.

Typically assaults constituted grabbing or pinching to other peoples' arms, necks and breasts. These assaults could occur singly but often formed extended episodes involving as many as five grabs or attempted grabs per minute. Staff found these assaults particularly hard to deal with emotionally because of their very painful nature and just as importantly because Susan would often apparently smile at the same time as she was hurting someone.

When asked how they could guarantee the problem would happen staff reported that a change from one classroom to the next seemed to have this effect as did placing demands on her. They added; "If you just let her sit and do nothing in her place all day you'd have no trouble with her."

Because of the urgency of the situation and the fact that the educational psychologist would not be able to do a full behavioral assessment and functional analysis (Willis & LaVigna, 1996 a; b) because of other local authority duties, it was decided to collect video data (with parental consent) as a way of accelerating the assessment process. A total of just under an hour's worth of video recording was collected on Susan in the space of one morning, some of it in her own classroom and some of it in the art room. There are ethical issues surrounding the use of video recordings and these will be dealt with in a later section but the video recording, together with a review of written records and interviews with staff, was instrumental in achieving a very rapid reduction in grabbing and pinching to the benefit of all those involved.

A Means to an End

The first section of video sees Susan sitting on her own appar-

ently quite happily. She is sat apart from the rest of the group of children on the advice of the educational psychologist so that it is more difficult for her to grab anyone. The situation gradually changes as the group gets ready to move to another classroom. As a child walks behind Susan she starts to look uneasy, twisting around in her chair to look at the people walking behind her. Her change of expression is fleeting, the sort of thing an observer could well miss, but with the facility a VCR has for repeated replays, quite clear and striking. As students walk past her to leave the classroom Susan looks increasingly tense and grabs at some of the children. For their part some of the children hold out their arms as though taunting Susan. Again, very fleeting behaviors which could easily be missed by an observer (especially if they are using a time sampling approach) but using the replay option very telling.

The next section of the video recording shows Susan in the art room where she is between two members of staff who are sat on either side of her to try and prevent her pinching any of the children. They do this because for Susan to play any meaningful part in the lesson she needs to be a part of the group. Consequently Susan is on a stool sat with the group of children, as the lesson progresses Susan's behavior deteriorates very sharply. In the space of a little under seven minutes there are at least a total of 33 actual or attempted grabs. It is decided that Susan's behavior is so bad that she should be taken back to her classroom. Susan immediately calms down and stops grabbing as she returns to the classroom.

The third section of the video shows the educational psychologist talking to Susan and working with her on progressive relaxation. However, before this starts she is asked where she wants to sit; she is very emphatic about sitting with her back to the wall and with the table in front of her to act as a barrier.

With this video in the can, so to speak, our initial hypothesis was that Susan was insecure, probably suffering from separation anxiety and grief; found changes of room aversive and would therefore benefit from a corner of the classroom which she could identify as her own. For reasons we didn't fully understand she clearly liked to sit with her back to the wall. We therefore determined to make a part of the classroom as homely for her as possible, hanging a cloth on the wall, placing her chair against the wall in a corner with her own table in front of her. Susan was also told that she could bring two soft toys into school with her and these could sit on a chair next to her in her home corner. She chose a rug rat and a gorilla: in more formal terms the presence of these toys could be seen as an ecological manipulation since it improved her environment by increasing non-contingent reinforcement (commonly known as fun). It was first thought that we would have to reconcile ourselves in the short term to Susan spending most of her time in her "home corner" while she gradually settled into her new school and a program of desensitization to movement around the school was started.

The use of videotape accelerated the pace of assessment so that we could start to implement a partial treatment plan, which included only ecological strategies and reactive strategies, the day after recordings had been completed. The impact on Susan's behavior of these purely ecological strategies was immediate and dramatic in foreseen and unforeseen ways. Not only did her rate of grabbing and pinching fall to much lower levels as from the first day of implementation — as the chart depicted in Figure 1 reveals — her attendance rate also improved from an average of 45% to 79%.

What was unexpected was her greatly increased willingness to leave her classroom. Providing she could take Tommy the Rug Rat with her she would go to other classrooms without the sorts of intense episodes of grabbing and pinching which had been a feature of her behavior previously. We decided to

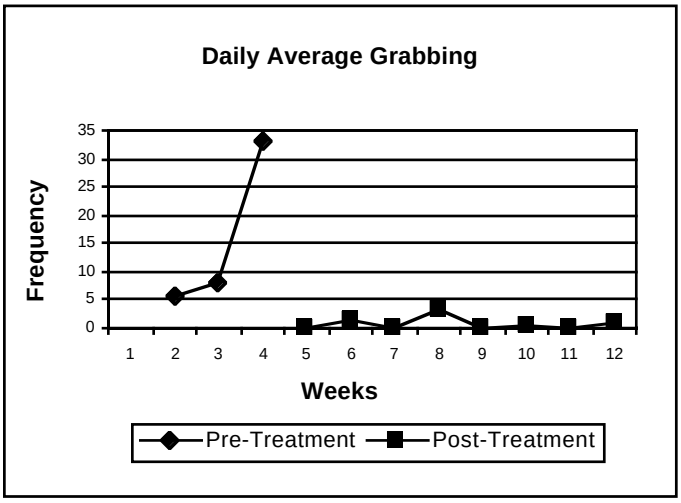

Figure 1 - Effects of Ecological and Reactive Strategies on Grabbing

shelve for the time being our previous plans to desensitize Susan to moving around the school. When problems did occur they tended to be at more unstructured times, for example in the corridors, in the school hall during lunchtime, in the playground. If problems occurred Susan would be told to go to her home corner which she was always pleased to do and this constituted our reactive strategy.

In the light of the experience gained and the information on videotape the educational psychologist again reviewed the file and talked to Susan's mother. At this point a highly significant piece of evidence came to light which completed the jigsaw. As a toddler learning to walk Susan had to overcome the problems caused by her cerebral palsy. In particular she had often had very painful falls because of her tendency to startle in response to sudden noises behind her (particularly sneezes) and topple over backwards. Her lack of saving reflexes exacerbated the situation and meant that what would have been no more than a sudden bump for most toddlers was experienced as a traumatic, painful and potentially dangerous loss of balance and control. Susan had eventually learned to save herself by reaching out sideways and grabbing the first thing she could as hard as she could. Susan no longer falls over backwards in response to loud noises but her early experiences will have constituted prolonged and intense conditioning the long-term effects of which we were beginning to understand.

With this knowledge we could again look at the videotape. Now the reason for Susan's tenseness when someone passed behind her was completely understandable, someone behind her might mean a loud startling noise, loss of balance and pain. The episode in the art room now appeared in a new light, we had inadvertently placed Susan in a nightmare situation, perched on a high stool with no back support and with people moving around behind her. In these circumstances, no longer was it surprising that she would grab, in ways she had learned as a toddler made her secure, it might even begin to explain the grin that staff found so irritating. Maybe, Susan was trying to communicate that she wanted someone to be her friend and help her out of this situation.

In the light of the mother's testimony and the clues given us on video it also became clear that one of the children knew very well from his long experience of Susan in their previous school that he could tease and provoke her if he made sudden noises behind her. We think this has contributed to Susan's aversion of having children sit next to her - another antecedent we had found to grabbing and pinching.

The striking thing so early in the treatment program is the impact on Susan's behavior of such simple ecological and reactive strategies alone. Susan is clearly a much happier girl, her attendance has improved and she now routinely leaves her own classroom in ways that seemed impossible only weeks before. Much remains to be done but there is no doubt that Susan's quality of life has improved greatly. Presently a multielement treatment plan (LaVigna & Willis, 1995) for Susan is evolving which amongst others contains the following elements that are pertinent to the present discussion.

Ecological Strategies

The main ecological strategy is the one already discussed, the provision of a home corner for Susan where she feels safe from disturbance from noises occurring behind her. The provision of the two soft toys could also be seen as an ecological strategy since it greatly increased the availability of non-contingent reinforcement in her environment.

Maybe, Susan was trying to communicate that she wanted someone to be her friend and help her out of this situation.

Positive Programming

Susan is being taught the use of an assertive statement, "Please give me more space," to serve the equivalent function for pinching and grabbing when she feels crowded.

We have begun progressive relaxation training with Susan and will be preparing a tape of noise so that she can learn to tolerate sudden noises occurring behind her. Given the probable strength of Susan's

conditioned response to these noises tolerance training at meal times seems the best option. We will also need to teach Susan problem solving routines to use in situations in which she feels uncomfortable or vulnerable so that she can escape these situations without hurting people.

Direct Treatment Strategies

The use of rewards to date has been relatively loose and unstructured. Verbal praise with feedback is used when Susan goes for periods without grabbing and pinching. Up until Christmas 1997 (the time of writing) Susan was also working towards obtaining a "good video" showing her in a good light which she could take home as a Christmas present providing the improvement in her behavior was continued in the judgement of her teacher.

Finally, given that an element in the problem of pinching and grabbing is peer teasing, one possibility we will be exploring is a group contingency in order to give the rest of the class an investment in the situation improving.

Reactive Strategies

The reactive strategies used presently include the reduction of demands and access to Susan's home corner.

The Use of Video Recordings in Functional Assessments

Although not a substitute for a full functional assessment, the one hour video contributed very significantly to developing the depth of understanding that is necessary if attempts to help them overcome severe and challenging behavior are to be accurately and effectively focused. But there are very real ethical issues to be considered and perhaps these should have priority before going on to discuss the advantages.

It needs to be recognized that videotaping someone, possibly when they are engaged in severe and challenging behavior, has the potential to be very demeaning. To undertake this sort of work there needs to be consent on the part of the child's parents and a clear case that the urgency of the situation warrants this step (both conditions were met in our view in Susan's case). How the issue of consent would be handled with adult clients is an area we are not competent to judge and leave to our colleagues in services for adults to consider.

there are very real ethical issues to be considered and perhaps these should have priority before going on to discuss the advantages.

Thought also needs to be given to whether or not the subject of the video should watch if it includes shots of their severe and challenging behavior. Our view is that this should not happen in any circumstances. It seems to us that the person will either find watching their own challenging behavior aversive (which automatically precludes its use) or rewarding (which is not desirable for obvious reasons).

Although we tried to maintain the fiction that we were videotaping the class as a whole, the children soon realized that the focus of recordings was in fact Susan. Therefore some time was spent recording the children and letting them view a video of themselves. They were also actively involved in the recording of Susan's "good video" looking through the camera viewfinder, sitting next to Susan and taking part in role plays where she uses the assertive statements we were teaching her. Clearly then the impact that videotaping may have on others present in the person's environment needs to be considered.

One area, which needs to be treated very carefully, is the issue of staff expectations regarding video recordings. There are two points here: the first is that it needs to be emphasized to staff that they are not expected to provoke severe and challenging behavior deliberately so that it can be videotaped. If they are in a position to do this then videotaping is partly redundant as we can find out from a conventional interview what the antecedent conditions for severe and challenging behavior are. The second point is that if severe and challenging behavior does occur they should do

whatever they think best and would normally do to make the situation safe as soon as possible. Without this injunction staff, in our experience, have a tendency to let the situation run longer than they normally would as they think it will be helpful to the psychologist to get as much on video as possible. Consequently the fact that safety has an absolute priority over everything has to be emphasized to all of the staff involved.

Staff feelings need to be addressed particularly if it becomes clear from the video recordings that their behavior is inadvertently contributing to problems. Experiencing severe and challenging behavior is stressful enough without the added stress of being caught on video as you struggle to cope with the situation. It is perhaps significant in this respect that the staff involved with Susan on a daily basis expressed great satisfaction (shouts of laughter) when the psychologist is seen on video getting pinched and grabbed as well as just the regular staff. Clearly trust and mutual respect will make this process a lot easier. If it is an outsider such as a psychologist who is involved in doing the recording then we would suggest they get involved in the activities being videotaped and become a participant rather than "director." Riding breaches, horsewhip and megaphone are definitely not required.

Other Issues That Need to be Thought About in Advance

Whose property is the video recording? If the recording is deemed comparable to file notes, what measures will be taken to store and then destroy it when the person becomes an adult? If consent (including staff consent) is obtained for using the video for training purposes who will and will not be allowed to see it?

So far we have concentrated on the problems of videotaping and the safeguards and issues which need to be decided upon. However, there are very real advantages to be gained from this technology and we will try to give some flavor of these by using illustrations from this and other casework.

Staff Training

The power of video to reveal during assessment the stimulus conditions for the occurrence and non-occurrence of problem behaviors in assessment also gives it great power as a training tool.

One child we recently worked with had a history of severe assaults and non-compliance. In the video we took of her she is given instructions on two occasions. On one occasion she responds happily on the second she tantrums. The key to her tantrums was the way in which tasks were introduced to her. If the adult placed their face close to Tracey's and used the sort of tone of voice a playful parent would to a baby or toddler, e.g. "Trraaacccceeeyyy, who's a lovely girl?....you are....yes you are.....yyyyyessss youuu are! Look what I've got for you (showing Tracey her tray of work)....'..Then Tracey would show every sign of pleasure and comply with adult requests framed and delivered in this way. If, on the other hand, the adult used a stereotypical and entirely reasonable teacher approach—"Tracey go and sit at the table. It's time to do your work"—a severe and intense tantrum, which might escalate into assault, occurred within four seconds of the instruction being given. Being able to show staff how to and how not to give instructions to a particular child can be invaluable, particularly when, without the sort of vivid evidence only video can provide, staff could be forgiven for being reluctant to put their face close to the face of someone with a history of assaults.

The Video Allows Calm Reflection of the Child's Behavior

Observing children in situations where they and the staff who support them are under stress is in itself stressful and so it is very easy to miss or fail to understand the significance of events. For example, in the present case, the educational psychologist and other staff were often on tender hooks trying to observe and contribute to making the situation safe with a student who was very volatile. At the end of the videotaping session the educational psychologist had a "feeling" that Susan's peers were sometimes teasing

Experiencing severe and challenging behavior is stressful enough without the added stress of being caught on video as you struggle to cope with the situation.

her although he could not say why he thought this. It was only when he viewed the videotape away from distractions that he realized this "feeling" was based on an incident that lasted for three seconds on the videotape. Presumably he had glimpsed the situation but it had not fully registered because of the combination of stress and the large number of distractions inevitably present in a busy classroom.

The Videotape Allows the Repeated Viewing of Critical Incidents

Some of the behavior we observe is not only severe and challenging it is also complex and easily misinterpreted - the ability to view the same critical incident repeatedly and in juxtaposition with other incidents can be invaluable. In the case of Tracey this was fundamental in understanding the function of some of the behavior which constituted a part of a complex chain of tantrum behavior. One of Tracey's favorite activities was tickling games. Because she has no functional language her way of communicating this was to grab someone's hands and place them on her tummy. During tantrum behavior in response to instructions Tracey would run around the room, beat the floor with her hands, scream, grab adults" hands and pull them towards her and then sometimes bite her own hands or the teacher's hands. It had always been assumed that when Tracey was pulling someone in this way it was because she wanted to bite them. With repeated viewing of the video and by juxtaposing the videotaped tantrum behavior with that of Tracey "requesting" a tickling by pulling someone's hands, a new interpretation of her tantrum behavior emerged. The message value of which was—"I don't want to do x but I would like a tickling game...if you carry on trying to pull away from me and so not listen to me I'll get so frustrated I will bite myself or maybe even you." This is quite a different message to the one we had assumed Tracey was giving during these episodes, which was—"I don't want to do anything and I'll bite you if you try to make me." This insight enabled us to start working on ways of de-escalating tantrums when they did occur as staff realized they could respond to Tracey grabbing them by, in effect, saying, "Okay what do you want? Show me." Thereby reducing the risk of Tracey biting herself or others.

> ***...the ability to view the same critical incident repeatedly and in juxtaposition with other incidents can be invaluable.***

Viewing the Videotape on Fast Forward Can be Very Revealing

For many years city planners have realized that viewing videotape on fast forward dramatically highlights traffic flows and bottlenecks. The same holds true for classrooms. It can also reveal very quickly which children are never in their seats, which children never leave their seats, which children get high rates of teacher proximity and which children get low rates of teacher proximity. It can highlight "down time" when there is nothing for the child to do. As a prelude to data collection using a videotape the educational psychologist always views the tape on fast forward first because of clues this gives on which particular behaviors or situations should be focused on in detail for data collection.

Videotape is a Potent and Underused Quality Assurance Tool

In a previous study the educational psychologist was involved in videotaping a teacher while a Rules Praise Ignoring (RPI) approach was used together with a group contingency using differential reinforcement of low rates of responding (DRL) in order to help a highly challenging class of 15-year-olds (Frankland, Pitchford & Pitchford, 1985). In the course of three weeks dramatic improvements were obtained which were maintained two months after the DRL was faded out. It was only some months later that the educational psychologist realized that what was remarkable about this particular video was not the improvement in the classes behavior (gratifying though that was) so much as what might be termed the teacher's 100% compliance with the methodology recommended by the educational psychologist. Anyone who works in the field of advising staff will know that such a very high level

of compliance is, well, unusual. Although the educational psychologist concerned would like to ascribe this phenomenon to charisma, it seems more likely that the process of agreeing to and being videotaped was the most significant factor.

This is what was happening; the educational psychologist would give the teacher briefing notes containing a rationale for and description of the techniques to be used before each of the four lessons videotaped. They would then be discussed, modeled and clarified if necessary. The lesson would be videotaped and then the teacher, not the psychologist, would take the video to view it before the next session; the educational psychologist only looked at the video in detail at the end of the project in order to collect data. The combination of notes, discussion, modeling and explanation, followed by an opportunity to practice and get extremely vivid confidential feedback on the teacher's own performance and its impact on the class seems to have led to this high level of compliance.

…without this video feedback he would have found it difficult to maintain the high rates of praise required.

In his discussion notes about the experience later, the teacher noted that the video was crucial in helping him come to terms with the fact that a high rate of praise did not seem artificial as he had feared it would. It seems likely that without this video feedback he would have found it difficult to maintain the high rates of praise required. What struck the educational psychologist was that even incidental "off the cuff" comments could be seen to have had an impact on the teacher's behavior. At one point the psychologist made the comment that simply pointing to some work and saying, "That's right," could be considered as praise (or more accurately feedback) and so would tend to increase time on task. No more was said on the matter and it was not included in the written notes. Nevertheless, in the next video after this discussion, the teacher can be seen walking down the rows of desks going: "That's right, good, that's right. Good Steve, you got that right. That's right Anne. That's right." Given the right climate of trust and respect it is clear that using the video camera as a means of providing feedback as part of training could lead to very real improvements in expertise and quality. Its impact in conjunction with three-tier training (LaVigna, Willis, Shaull, Abedi & Sweitzer, 1994) would be a particularly interesting area to explore.

Being videotaped is very rewarding to children and enables them to model and get feedback on alternative ways of behaving

A good example of the way in which video can be used as a teaching aid with children is the work of Edwards and Prouxl (1997) where they report the use of edited videotape in the treatment of selective mutism so that the child could watch herself engaged in speaking. They report that this strategy produced rapid and lasting change in the child concerned.

In our own more modest way we included in Susan's good video shots of her role playing one of the functional equivalents for grabbing, asking people to leave her table because she felt crowded. In our view if video is used to collect data on a child, then one way of making recompense for this intrusion would be the production of a "good video," which then becomes the child's property.

Conclusion

To conclude, the video camera has great potential in our field and it is surprising how rarely it is used for the purposes of data collection, analysis, training and quality assurance. In areas associated with security the video camera is becoming ubiquitous, perhaps therefore now is the time to come up with a code of practice on its use before somebody decides to do it for us. If a code of practice is developed then it will have to reconcile the power the video camera has with the need to protect the dignity and confidentiality of those we seek to serve.

Footnote: Fiona Skinner is an Education Care Officer, Hillary George is a Teacher at St. Andrews School in Derby, U.K. Mick Pitchford is the Principal Educational Psychologist for Derby City Educational Psychology Services, Derby, U.K.

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The groups utilize the framework of an anger management curriculum originally developed for use through Tri-Counties Regional Center, based in Santa Barbara, California. Subsequent to its development and use with adults in the Santa Barbara area, the curriculum was adapted for use and piloted with school-age students in a special education classroom (see McLain & Lewis, 1994). This guideline and curriculum for an instructional group was originally developed to assist individuals with developmental disabilities who have difficulty controlling their anger in their home, work, school or community environments. It was an outgrowth of the behavior intervention efforts at Tri-Counties Regional Center to assist persons to remain in community living arrangements, to integrate physically and socially into the community, and to obtain and maintain employment.

Since being implemented within the context of supported living services at IABA, the curriculum has been modified to fit the needs of many different individuals, and has evolved from a relatively short-term program into a long-term skill acquisition, skill maintenance and support group. The use of the curriculum has also provided fertile ground for group members to develop supportive relationships that have persisted outside of the group environment.

While developing supports for individuals who have difficulty controlling their anger, it became apparent that most of the research literature on teaching anger management skills was addressed to persons without developmental disabilities (e.g., Hains & Szyjakowski, 1990; Glick & Goldstein, 1987). This curriculum represents an effort to utilize the approaches which have appeared most promising for all populations, adapt them for use by persons with varying degrees of cognitive disabilities, and present them in a flexible group format that can be adjusted to the participants' abilities and learning style.

The concepts are based upon behavioral and cognitive behavioral frameworks and incorporate the work of Novaco's Stress Inoculation Therapy (1977), Kaufmann and Wagner's Systematic Treatment Technology for Temper Control Disorders (1972), Benson's (1986) approach to self-instructional training and problem-solving skills, as well as Personal Effectiveness Training described by King, Liberman, Roberts, and Bryan (1977). In addition, the curriculum addresses arousal management through relaxation training, recognition of internal and external cues to manage anger, demonstration and practice of problem solving skills and self-instructional training. This program is an eclectic blend of various anger management strategies. The approach has been successfully used with children, adolescents, and adults who possess the following prerequisite skills:

1. The ability to attend in a small group setting (4 - 8 participants) for at least fifteen minutes at a time.
2. The ability to receptively and expressively communicate verbally, with signs or pictures or through a communication device.

The curriculum is designed to be modified to fit the specific needs and abilities of the group members. For example, when presenting the program to a group of adolescents who have mild disabilities and who are able to read and write, the focus should be on changing the internal thoughts that precede an anger outburst. Written homework exercises would also be useful with such a group. A group of children who have moderate disabilities and limited abilities to read and write would benefit from an emphasis on role playing and behavior rehearsal of appropriate behavior following exposure to provoking situations. The cognitive-behavioral aspects of the program may be simpli-

fied in order to suit the children's cognitive abilities. For people with severe disabilities, a focus on relaxation training and a specific, prescribed plan for responding in challenging situations may be most beneficial.

The effective and consistent use of learned anger management skills is, like many other skills, dependent upon the individual's retention, application and generalization of these skills in natural environments. It has long been documented in the behavior analysis literature (e.g., Wahler, 1969) that persons with developmental disabilities have difficulty generalizing newly learned behavior across environments. To reduce the problems associated with failure to generalize, this anger management curriculum is designed with special attention to promoting, shaping, and generalizing self-control and problem-solving skills from simulated to natural environments.

One of the most effective strategies for promoting generalization involves planned training and exposure to the naturally occurring contingencies in the natural environment (Stokes & Baer, 1977). To achieve this end it is essential to include persons from each participant's natural environments in the program. These social agents are enlisted to assist in cueing individuals to frequently practice newly learned skills, and most importantly, to reinforce and support individuals when they spontaneously use these skills under naturally occurring provocations. This works very well when the group participants are also service participants and group facilitators have access to and regular communication with support staff, peers and families.

Facilitation of generalization and maintenance is a primary reason that training is done in a group rather than individual context, although specific group members often benefit from "booster" sessions, which could be done individually or in dyads. When anger management and assertiveness skills training is done in a group context, members are provided with opportunities to practice self-control and appropriate responses to others with whom they typically interact on a regular basis. The leadership of the group by a staff person and attendance at group sessions by support staff as well as roommates and acquaintances increases the likelihood of opportunities to reinforce and shape desired behavior outside of the group. Regular communication with additional involved service providers and families provides a foundation for generalization and maintenance.

Forming the Group

It is usually not difficult to identify the people who may benefit from participation in an anger management group. These are people who, in a school, work or living environment, are identified by peers, teachers, support staff, school psychologists, counselors, job coaches, parents, case managers (i.e. key social agents) as having trouble controlling their anger. Additionally, these are people who may have already been referred for the development of a behavior assessment and support plan. Persons appropriate for this group evidence verbal and/or physical aggression to the point that these behaviors interfere with the person's achievement of personal goals or their ability to function or remain in regular environments. For some people, behavior challenges emerge as they adjust to major life changes. There are a number of stressors that people who are new to living in community settings may be experiencing for the first time. People's coping abilities may be challenged by these experiences (for example, the difficulty of surviving on a poverty-level income or the challenge of starting a new job).

When forming the anger management group, an individual could be invited to participate by finding out whether or not they are satisfied with the way their day-to-day life and/or personal relationships are going. Suggesting that the individual participate in the group because they have an anger problem may prove an unsuccessful strategy. This is one of the reasons that the groups that operate in Ventura County are called "stress management" groups rather than "anger

To achieve (generalization) it is essential to include persons from each participant's natural environments in the program.

management" groups. A positive approach is to introduce participation in the group as a way for the person to more effectively get the things they want, have more friends, have access to desired activities, and also as an opportunity to discuss stressful situations as they occur. Exploration of the individual's short-term and long-term goals is a way to accomplish this.

The key social agents can promote generalization and support the individual's efforts to improve self-control by recognizing and reinforcing the skills that are taught in the group.

It is essential that the people who most frequently interact with the group participant support the work that is done in the group. Key social agents can do this by providing information, communicating with the participants about their progress, providing subtle prompts in natural settings, collecting data on behaviors targeted in the teaching sessions, and participating in sessions as requested by the group leader. The key social agents can promote generalization and support the individual's efforts to improve self-control by recognizing and reinforcing the skills that are taught in the group. Group participants are encouraged to share their progress with key social agents. These persons must be kept informed on a regular basis by the group leader about how to support the anger control plan and about individual progress. Therefore, it is necessary to secure, preferably in writing, the permission of the participant to contact family members or people outside of the support system on a regular basis. The formal curriculum includes suggestions for what information should be communicated each week to these people.

Certainly, people with developmental disabilities present with a wide range of verbal, reading, social and cognitive abilities. In addition, a number of the adults participating in community based services through IABA also experience symptoms of various forms of mental illness such as depression, schizophrenia and manic-depression. It is therefore necessary to adapt this curriculum for individuals depending on their abilities to process and retain information and monitor and reflect on their own thought processes. For people who have difficulty with the cognitive aspects of the curriculum, instruction should focus on behavioral approaches of developing and rehearsing problem solving skills as alternatives to temper outbursts. For persons who do not read, pictures or a tape recorder may be used during training in a variety of ways (e.g., flow charts, self-monitoring procedures).

The curriculum may be presented effectively with one or two people in leadership roles. With two leaders it is possible to do a large group presentation of the session topic, then break into smaller groups for discussion and practice of individualized application of the material. The use of two leaders provides the participants with greater opportunities to practice the target behaviors, identify individual problem situations, and allows more time for questions and discussion of the material. If two leaders are used, they should have a solid understanding of the material to be presented and be in regular communication regarding individual participant progress. If a small group format is used, the members of the small groups should be varied from session to session in order to facilitate generalization across individuals.

Assessment and Progress Monitoring

Prior to participation in an anger management group utilizing these guidelines, preliminary assessment information should be obtained in order to appropriately adapt the curriculum. Certain participants may become involved with the group as a recommendation of their behavior support plan, in which case background information should be found in the assessment. Some of the curriculum sessions demand higher level cognitive skills than other sessions. It is essential that group leaders utilize ongoing as well as preliminary assessment procedures to determine whether the individual is able to encode, retain, access, and utilize the specific strategies taught through the exercises and most importantly, under naturally

occurring conditions. There are some guidelines for assessing the individual's success in retaining and utilizing learned strategies provided in each session.

The preliminary assessment may include documentation of the frequency, duration and intensity of the anger problems. If a behavior assessment has not been completed, prior to attendance at the first session, key social agents in all environments should collect at least this basic information. One method for collecting information consists of an antecedent-behavior-consequence format. The key social agent observes the individual's behavior and documents the time and place that the behavior occurred, the antecedent to the behavior (what was happening in the environment just before the behavior occurred), and provides a detailed description of the observed behavior, including its duration. An account of the events immediately following the behavior (the consequences) should also be noted.

Brief interviews with participants and key social agents can be used to obtain information about the individual's medical status, sleeping and eating patterns, means of communication, environment and daily schedule with its concomitant demands. Information about activities and items that may motivate the individual is important when developing an array of reinforcers for use during the program.

Overview of Training Sessions

Goals of the Group

The primary goal of training is to give each person the tools that they need to effectively manage their anger. Inadequate anger management may result in temper outbursts, verbal or physical aggression, property destruction, self-injurious behavior, and a range of other individualized behaviors. In addition to other factors, these behaviors may occur in part because of a person's inadequate repertoire of non-aggressive problem solving skills or because of a lack of motivation to engage in pro-social behavior. Many individuals have learned that aggressive behaviors meet their needs for attention or help them escape or avoid undesirable activities. Many persons who have developmental disabilities manifest poor impulse control and simply are unable to interrupt an arousal response in the face of provocation.

The curriculum includes skill training and practice in appropriate social skills (e.g., assertive behavior) and behaviors incompatible with aggressive behavior (e.g., relaxation) which have been demonstrated to effectively replace inappropriate social behavior (e.g., verbal or physical aggression). Through the cognitive-behavioral aspects of the program, individuals learn to interrupt the chain of behaviors that may lead to loss of self-control. Improvements in self-control have been observed to lead to increases in positive self-concept, which may have an entire range of positive effects on a person's quality of life.

Structure of Sessions

The sessions are divided into two parts. The first portion of each session consists of a short presentation and discussion of a specific topic followed by exercises presented by the group leader to illustrate the use of the skill being taught during that session. The exercises are an essential component of the session if the individual is to translate the information into personal practice, that is, adapt it for their own daily use in natural environments. Information presented to the group is *italicized* and structured so that the leader can give individuals information that is easy to understand and retain. Of course, it is often necessary to rephrase, repeat, and in some cases, greatly simplify the information to insure that it is understood.

The primary goal of training is to give each person the tools that they need to effectively manage their anger…

The second portion of each group meeting is presented in a format similar to Personal Effectiveness Training (King et al., 1977). In a small group setting (it is useful to have two leaders here to allow for even smaller groups) antecedent situations are presented via narration (to set up the situation) and role played (to present the identified antecedent) by the group leader. The participant is coached through modeling and instruction in developing an appropriate alterna-

tive response as identified for that individual. If possible, sessions should be videotaped, the best performances of the individual selected and repeatedly played for the individual, accompanied by comments on the best aspects of the performance. This "self-as-a-model" approach (Hosford, 1976), is quite useful for youth with developmental disabilities.

Individuals begin to develop problem solving skills which help them to discriminate which situations warrant assertive responses.

Outline of Sessions

During sessions 1 and 2 the rationale for learning to manage one's anger is presented to increase motivation and commitment to the process. Individuals are then assisted with identifying individual behavior patterns and antecedents to temper outbursts that are targeted during group or dyad role-play sessions. The term "antecedents" is replaced by the term "barbs" (from Kaufmann & Wagner, 1972) to simplify the idea.

Sessions 3 and 4 continue antecedent identification and cover the fundamental skills required for anger management, namely, recognizing internal cues and developing relaxation skills. Relaxation procedures consist of modified Jacobson (1938) Progressive Muscle Relaxation. The goal is to help each person identify a deep state of muscle relaxation and produce it quickly in the natural environment. Session 5 focuses on the physiological changes that should cue individual's self-regulatory behaviors. Session 6 reviews all previous material in order to help participants integrate it through review, exercises and instruction.

The advanced cognitive-behavioral aspects of temper control are explained in Session 7. Modifications of the cognitive-behavioral treatments for persons with developmental disabilities have been explored by some researchers (Benson, Rice, & Miranti, 1985). These modified treatment approaches are presented and adjusted to fit the needs and abilities of each group participant.

Basic assertiveness skills are taught in Session 8 with a special emphasis on discriminating assertive from aggressive responses. Individuals begin to develop problem solving skills which help them to discriminate which situations warrant assertive responses, differentiate appropriate from inappropriate requests from others and practice effective communication skills.

Session 9 focuses on strategies for identifying and defining problems, generating behavioral alternatives, and evaluating the outcome of those decisions. Part of this session focuses on the positive evaluation of outcomes and constructive self-evaluation that promotes behavior change and self-esteem enhancement.

Session 10 focuses on the more subtle aspects of social skills involved with assertiveness responses. Topics such as dealing with repeated criticism, reinforcing others for desirable behaviors and communicating feelings without blaming are practiced. Making requests for behavior change from others is incorporated into a sequence of behaviors.

The final session (11) reviews all material and role-play situations. Individuals are encouraged to set personal goals and continue anger management strategies on their own.

Additional Considerations

This outline can be modified to include additional strategies or to extend the number of sessions for difficult topics. There should be ongoing evaluation of the need for individual, topic-specific sessions to augment the group sessions. Special modifications for presentation of material to group members who, for example, do not read, is the responsibility of the group leader. The group leader should assess through questions and role-plays, the amount of time needed for individuals to master the material and extend the number of sessions per topic as needed. Individuals may develop anger management strategies that do not follow the exact skills presented here; the group leader should allow this flexibility if the strategies are useful for the participant. It is the adjustment of the curriculum to meet individual needs, which contributes greatly to its effectiveness, although this also necessitates a certain level of sensitivity and sophistication in the group leaders.

Initially group leaders may choose to create incentive systems to motivate individuals to attend sessions and complete homework assignments. This can also be done in conjunction with key social agents. At IABA, several people have protocols for attending stress management sessions on a regular basis. Their protocols specify reinforcers that can be earned for achieving their attendance goals. Incentives may be arranged to occur in natural settings during and after the training period when key social agents observe an individual using a strategy practiced in training. Group members may reinforce each other as they see each other use appropriate problem solving skills in natural settings. This is another reason for regular communication with key social agents regarding the current training topic and weekly goals of each person.

Once group members have been through the entire curriculum, the framework can be used to work through each week's "barbs" on a regular basis. Often group members can relate to another person's "barb" and can provide feedback from their own experience, further developing an atmosphere of empathy as well as generating practical solutions to real-life problems. Soon the group members are taking more active, directive roles in the group and the leaders can move more into the background.

Staff persons other than the group leaders should be encouraged to participate as group members without dominating the group with tales of their own "barbs." Staff persons can assist as models during relaxation and role-plays and can assist with keeping the group on track. A discrete amount of appropriate self-disclosure goes far in dispelling any sense of "us" (staff) vs. "them." Participants have always seemed to appreciate it when staff persons open up. The stress management groups have also taught support staff practical coping skills for themselves as well as fostering future group leaders and encouraging follow through outside of the group environment.

For longer-term groups, the routine of the format can be broken up by taking "stress management field trips" to relaxing settings, or by playing a social skills game such as the Ungame (Dobson). With the original Ventura County group, participants had learned progressive muscle relaxation and had moved to guided imagery. During a guided imagery session, the leader described a waterfall and later learned that none of the group participants had ever seen a real waterfall. A field trip was made to a waterfall, where group members were encouraged to use all of their senses to experience the setting so that they could subsequently call upon their memories to achieve a relaxed state.

The use of the curriculum with adults in supported living has proven to be extremely effective and has resulted in improved self-control and self-esteem for participants. Each group leader has brought their own unique style and personality to the groups, resulting in a flexible approach with long-lasting results. Participants have demonstrated their ability to learn the basic way to work through "barbs" even when they are not in the group setting. Support staff report improvements in their ability to manage challenging work loads as a result of participation in the groups.

The first session is included in Figure 1 (see page 16) as an example.

As can be seen, the sessions are set up to engage the participants in the purpose of the work, let them know that they are not alone in experiencing such difficulties, and provide concrete direction for recognizing and addressing the impact of anger and loss of control on their lives. The homework serves as a solid reference point for the previous week's session. The curriculum has been successfully used in a flexible manner, tailored to individual needs and specific group dynamics. This requires a certain level of sensitivity on the part of group leaders. We have typically found that group leaders are excited by the curriculum and by

Often group members can relate to another person's "barb" and can provide feedback from their own experience, further developing an atmosphere of empathy as well as generating practical solutions to real-life problems.

SESSION 1: RATIONALE FOR TRAINING

WHY IS IT IMPORTANT TO LEARN TO CONTROL YOUR ANGER?

This discussion should focus on problems created by poor anger control. Discuss each of these facts with the group.

- *When people lose their jobs it's usually because they can't get along with their boss or co-workers, not because they can't do the work.*
- If you hurt someone and the police are called the person you have hit may wish to press charges, which can result in you having to go to court. If it has happened before, you may be asked to move to a different place. If you get really mad and are hurting people, you may have to go a special hospital called a psychiatric facility.
- You may lose friends or relationships. Your family may not want to spend time with you. People may not want to be around you. This can be very lonely.
- You can lose your job and lose the chance to get a new job. If your boss fires you because you fight with others, it may be hard to get another job.
- You may be kicked out of school for a few days (suspension), or be sent to a different school (expulsion) if you can't get along with others around you.
- You may not be allowed to continue to ride a bus independently if you have problems with your temper while you are riding the bus. This cuts down on your independence.
- People who stay angry may get sick more often and may even die at a younger age. Getting angry is hard on your body.
- When you yell a lot or hit others you might have to move out of places where you like to live.
- Most of you have decided you want to have a happier, better life by learning ways to control your anger and solve problems better.

EXERCISES

Have individuals list and discuss events in their lives in each area that have been affected by their anger:

- School
- Transportation
- Legal
- Friends
- Jobs
- Relationships
- Roommates
- Family

HOMEWORK

List the things that happen this week that make you feel angry and write down or dictate how you handled them. Use this format:

	Date	Time	Situation	What You Thought and Did
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____

NOTES TO THE GROUP LEADER

Provide practice for the homework assignment in class by demonstrating from your personal life an event you might include on the worksheet. Have each individual complete at least one entry and assist as necessary. Fade prompts so that the individual is able to demonstrate independent completion of an item.

Contact the key social agents in the participants' home, school or work environments and share with them any pertinent information that came out of the first session. Give them information about the homework assignment, and ask them to provide social reinforcement to the group member following daily completion of the homework.

Figure 1 - Session 1: Rationale for Training

the progress of participants. It is a dynamic process that allows a creative approach.

Footnote: For additional information, or a complete copy of the curriculum, please contact Dr. Ellen Lewis by writing to *Positive Practices*, Institute for Applied Behavior Analysis; Attention: John Marshall; PO Box 5743; Greenville, SC 29606 USA.

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The Use of Contingency Diagrams in the Functional Analysis of Challenging Behavior

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Editors' Note: In the following article, Peter Baker describes a method to communicate a complex understanding of challenging behavior to direct service staff. He rightfully points out that the formal assessment report is typically too wordy and off putting to accomplish this aim. Writing the report may be an important and perhaps critical part of the assessment and analysis process, and represent an invaluable contribution to the person's case file for future reference. In contrast, a visual portrayal may help current staff obtain a mutual understanding of why a person does what he does and, from this common attribution, a platform from which the team can work in a coordinated way to support the person. We thank Peter for his very thoughtful contribution.

Introduction

The importance of identifying the factors which may have given rise to, or maintain, an individual's challenging behavior has repeatedly been recognized as crucial if a successful intervention is to be devised (Carr & Durand, 1985; Didden, Duker, & Korzilius, 1997; Repp, Felce, & Barton, 1988; Scotti, Evans, Meyer, & DiBenedetto, 1991). Indeed, intervention without this sort of understanding may well be harmful and therefore unethical. Reaching an understanding of individuals who present challenging behaviors, to a degree that enables the construction of intervention plans, is not without it's difficulties. Not only is an understanding of the immediate contingencies affecting an individual's behavior required, but in addition it is necessary to understand how this has been shaped by their history and concurrent personal and environmental factors. Much has been written regarding the collection of information required to carry out a functional analysis. However, less attention has been paid to the process of synthesizing this vast array of information, beyond fairly unspecified instructions to summarize the information (O'Neill, 1990; Willis & LaVigna,

1996 a; b). The complex multi-variate nature of causation was recognized by LaVigna & Willis (1995), who suggested that this complexity needs to be matched by multielement support plans, in order that intervention with such individuals is maximally effective.

The reality for many people involved in the design of support plans for individuals who present challenging behavior is, to a greater or lesser degree, a reliance on others. These mediators are required not only to supply information to assist functional analysis, but are also required to implement the interventions devised. The latter raises almost inevitable problems with regard to consistency of implementation. Researchers using a cognitive - behavioral paradigm have begun to demonstrate that staff responses to challenging behavior may well be influenced by contingencies that are related to how they experience that behavior, in particular, attributions regarding causation and their emotional response (Dagnan, Trower & Smith, 1998; Hastings & Remington, 1994; Oliver, 1993). It is feasible that inconsistent responses may well be determined by individual differences in conceptualization. For example, the response by carers who believe the function of the individual's behavior is to elicit attention would be very different from carers whose perception of function is that of social avoidance. In addition, Toogood & Timlin (1996) demonstrated the influence carers' perceptions of severity might have on the process of functional analysis. They found that the perception of the severity of the challenging behavior affected the degree to which informant based functional analysis methodologies were able to identify functions. Clearly a shared understanding of the individual would greatly improve the likelihood of consistent program implementation and consequently maximize the chances of success. Thus any aids to the process of understanding, especially those which assist synthesis of information and the communication of formulations, should be welcome.

Willis and LaVigna (1993) produced the *Behavior Assessment Guide*, an extremely comprehensive assessment procedure involving gathering information from a wide range of sources and summary, synthesis and analysis in the form of a written report. The results of these assessments can often be written reports of telephone book length, using complex terminology that British care staff, at least, find inaccessible or off-putting. There is no doubt as to the value of these written reports to the author or those with a similar degree of sophistication, but the extent to which they really meet the need to communicate complex formulations to direct care staff could be questioned.

These (contingency diagrams are not considered to be a replacement of the more traditional narrative forms of presenting the results of a functional analysis, but rather as an adjunct.

The Challenging Needs Service in Hastings, East Sussex, England have found contingency diagrams to be an invaluable additional tool in their efforts to present and communicate relatively complex formulations. These diagrams are not considered to be a replacement of the more traditional narrative forms of presenting the results of functional analysis, but rather as an adjunct. Additionally, the discipline of producing these diagrams has been found to aid the process of synthesis of information in order to arrive at the formulation. Contingency diagrams are now routinely included in the initial reports and are commonly used, usually in the form of an overhead projector slide, in presentation of the formulations to groups of carers.

The following example illustrates how quite a complex array of information gathered from interview can be represented on a single sheet of paper. Information is presented regarding Tom in a manner that would resemble the initial stages of hypothesis generation based on information gleaned from staff through interview.

Tom is a 22-year-old man with severe learning disabilities who has recently moved into a new staffed house with three other adults with

learning disabilities. Previously he had lived since the age of 4 years in an institution for people with learning disabilities. He has a long history of self-injurious behavior; he frequently hits his head on the floor, on walls, on furniture and other hard surfaces.

Tom has very limited speech, just a few words which he may use for a variety of needs. For example, "dinner" may mean food in general, and "toilet" may mean that he wants to be on his own. All the residents' rooms are locked, at times, to prevent "trespass." Tom can't use his key and staff always carry keys to all rooms. He also has a small repertoire of Makaton (British signing system), mainly "please" and "drink". In general, it is not always clear from Tom's communications what it is he wants and this can lead to self-injury if his requests are misunderstood.

(This) example illustrates how quite a complex array of information gathered from interview can be represented on a single sheet of paper.

Tom needs help with his self-help and personal hygiene skills, and assistance through most of his activities. He is, however, the most able resident in the house and sometimes misses out on staff interactions because they are kept very busy with those who need a lot of help.

Tom is a very mobile young man who can move at great speed when he wants to. Once or twice he has slipped out through the back door, and through the garden, and has been found wandering up the road towards the town center. He has very little road sense, so he needs to have staff with him at all times when out in the community. Similarly, he has on occasions got into the kitchen, which is usually locked, and raided the larder; he has a voracious appetite!

Tom enjoys being out and about — walks, trips into the community and letting off steam in the park. Indoors he particularly enjoys activities involving food - cooking and eating meals, and even clearing away and washing up! He's not so keen on sedentary activities - watching TV and playing table games etc. However, he loves his personal stereo, though can't operate the controls effectively and has broken two already. He now only has access to his new one when a member of staff is available to help him. When he's wearing his personal stereo he will happily listen for long periods humming to the music and may even sit down for quite a while. He also had a full size cassette player in his room that he liked to listen to, but this was broken by another resident and hasn't been replaced yet.

Tom's self-injury can be quite serious at times. Staff have kept records of this and have formed some ideas about what "sets it off." Apart from occurring when he is frustrated by misunderstood requests, there are also other times when it seems likely to happen. These include situations where Tom is denied food. On one occasion recently he made it clear that he wanted another sausage with his meal but, unfortunately, there was only enough for two each and Tom had already had his; this led to a major bout of self-injury. He also gets very upset when he cannot have his personal stereo, or when he breaks it while using it. The other two factors that are likely to affect his self-injury appear somewhat contradictory. That is, Tom sometimes wants to be on his own, but can't always find the peace and quiet he's after, either because his room is locked, or because the toilet is engaged. All other areas of the house are communal. This can lead to serious self-injury. Conversely, there are other times when Tom is receiving very little staff attention and he may get distressed because nothing's going on. Staff feel that self-injury at these times may be a form of self-stimulation because he's bored.

Figure 1 (page 20) would represent a preliminary hypothesis, in particular illustrating the interactive and dynamic nature of the variables.

The advantages of these diagrams in comparison to a lengthy written formulation are:

- complex concurrent phenomena can be presented simultaneously rather than one…. word…. at…. a ….time (Mattaini, 1995).
- the expected impact of each element of intervention can be illustrated. For example, enhancing Tom's communication skills and training staff to understand Tom will result in fewer requests being misunderstood, with a consequent reduction in self injury.
- people with learning disabilities and their carers often feel more comfortable with information that is presented visually rather than in writing. As a result a shared understanding and a working partnership are more likely to be achieved (Murphy & Clare, in press).

Construction of the Diagrams

There are no set rules for the construction of contingency diagrams and examples of differing methodologies can be found, e.g. Clare & Murphy (in press); Mallot, Whaley & Mallot (1993) & Mattaini (1995).

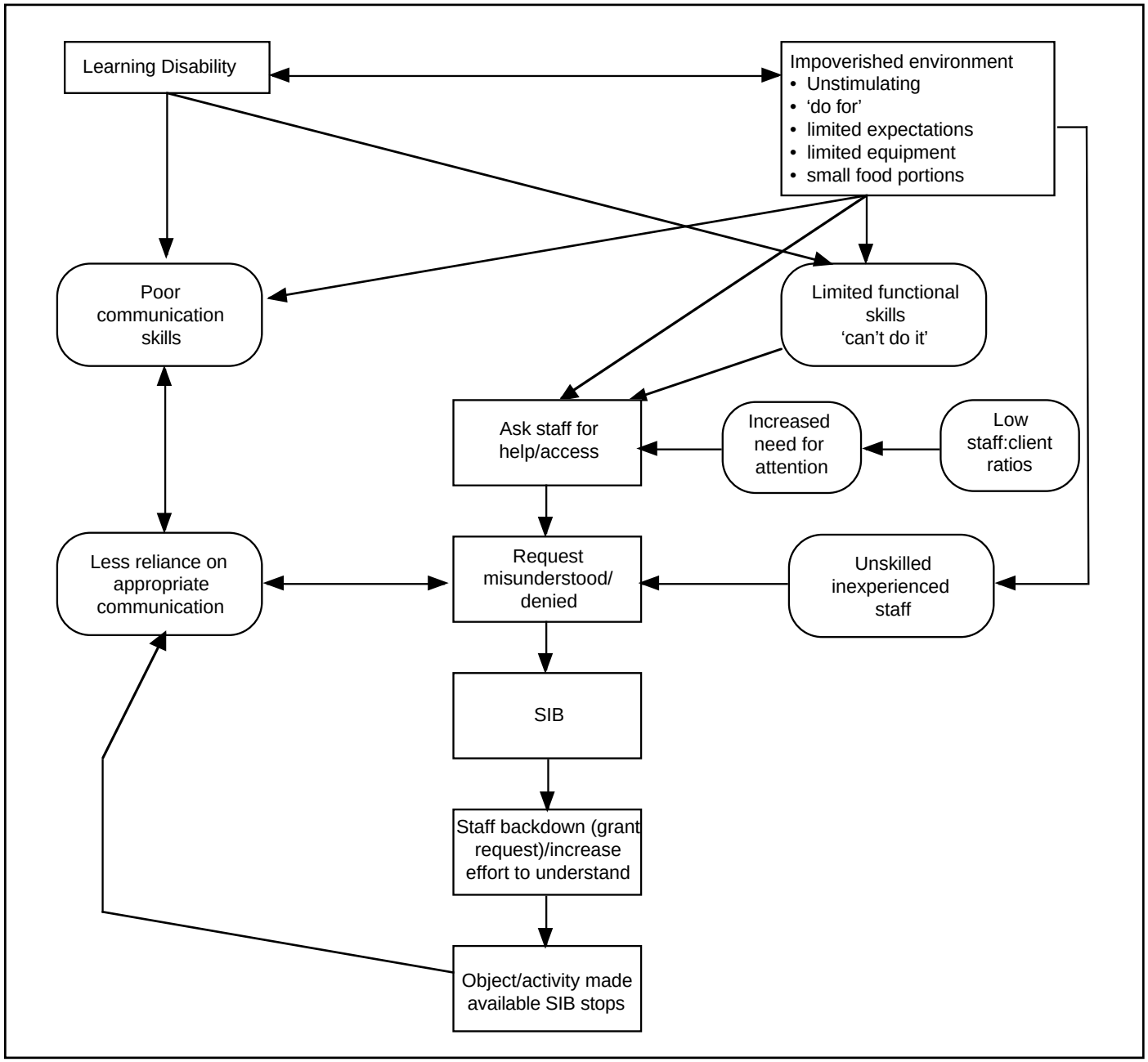

Figure 1 - Tom's Contingency Diagram

However, our experience has shown that the following steps are the most straight forward.

1. The starting point should be the immediate operant contingencies. In the case of Tom, it appeared that his self-injurious behavior was maintained by access to tangibles. That is, self-injury would be preceded by a request being denied (either deliberately or through misunderstanding) and followed by the object of the request being made available.
2. After the three term contingencies have been represented, the environmental (both current and historical) and personal variables can be added. These variables often function as establishing operations (Michael, 1982) or setting events, i.e., they serve to increase the momentary potency of the maintaining reinforcers. In the case of Tom, a complex array of historical, environmental and personal variables would be implicated. In particular, the unstimulating nature of the environment would enhance the reinforcing properties of, for example, his personal stereo. These types of factors can be seen as concurrently influencing the contingencies surrounding his self-injury.
3. In addition to the immediate consequences more delayed or less direct consequences of the behaviors can be represented. In the case of Tom, the relationship between his challenging behaviors and gaining access to tangible reinforcers will potentially result in less reliance on appropriate forms of communication, resulting in the increased likelihood of future misunderstandings. These often present as vicious circles and may well be identified as a priority for intervention, given that if left unaddressed, they may well become more ingrained.

Summary

As an adjunct to more traditional narrative presentation of the results of functional analysis, contingency diagrams have been found to be a useful tool in the assessment of individuals with learning disabilities who present challenging behavior. They have proven to be useful both as an aid to synthesis of potentially enormous complex and inter-related information and in the communication of formulations to direct care staff.

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Anger Management and Assertiveness Skills

William McLain, Tri-Counties Regional Center, Santa Barbara, California
Ellen Lewis, State of California Area IX Developmental Disabilities Board, Goleta, California

Introduction

In the last issue of *Positive Practices*, the authors introduced an overview of an Anger Management Curriculum. The article described the successful implementation of the curriculum with a wide range of consumers served by the Institute for Applied Behavior Analysis' supported living services (also known as Social and Community Integration and Participation, or SCIP). It also discussed the development of the curriculum and examined strategies for forming the groups and monitoring progress. See *Positive Practices*, *Volume III*, Number 3, April 1998 (McLain & Lewis, 1998). The first session of the curriculum was included as an example.

In this installment the authors detail each of the eleven sessions in the curriculum specifying the goals, scripts, exercises, homework assignments and notes to the leader for each session. The reader should keep in mind that these sessions were designed to be taught in a small group composed of four to eight participants, a leader, and one to two support staff and lasting between 15 minutes and an hour. As the need arises, the curriculum can be modified to meet the changing needs of the individuals in the group, as well as their particular learning styles and abilities. "For example, when presenting the program to a group of adolescents who have mild disabilities and who are able to read and write, the focus should be on changing the internal thoughts that precede an anger outburst. Written homework exercises would also be useful with such a group. A group of children who have moderate disabilities and limited abilities to read and write would benefit from an emphasis on role playing and behavior rehearsal of appropriate behavior following exposure to provoking situations. The cognitive-behavioral aspects of the program may be simplified in order to suit the children's cognitive abilities. For people with severe disabilities, a focus on relaxation training and a specific, prescribed plan for responding in challenging situations may be most beneficial" (McLain & Lewis, 1998, p. 10).

As discussed in the previous issue of *Positive Practices* "this curriculum is an attempt to incorpo-

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Editors' Note...

Welcome to another issue of *Positive Practices*. As usual, work has been busy for us. We are in the midst of our multi-year trainer of trainers and consultation project with Specialist Education Services in New Zealand. We are also off to the United Kingdom again for another round of training. We will providing seminars in Belfast, Edinburgh, Manchester, Sheffield, Birmingham and London. We will also be launching our fifth longitudinal course in London with 39 participants, our best turn out ever.

Gary W. LaVigna, PhD
Clinical Director

We have had a remarkable response to the anger management article written by Bill McClain and Ellen Lewis. Since its publication, Ellen has left IABA to take up an important position for an over sight agency in California. In that position, she is responsible for developing and over seeing a resource to monitor the quality of life of people challenged with a developmental disability who are living in the community. Knowing first hand Ellen's insistence on quality, we know that a lot of people will benefit enormously from her efforts. We are very pleased to publish this second in a hoped for series of articles on anger management.

Finally, we are pleased to include another article reporting the implementation of a Periodic Service Review (PSR) system. This one is reported by Hamish Jones from New Zealand. It is exciting for us to include this as the lead article in this issue of Positive Practices. This is not only because it describes the use of the PSR as part of a very successful systems change effort, but also because Hamish developed a way of quantifying outcomes that we have found very powerful. We think you will agree that he has created a measurement strategy that would strengthen any PSR system in the area of outcome measurement.

Thomas J. Willis, PhD
Associate Director

Gary W. LaVigna and
Thomas J. Willis, Co-editors

PSR: Progressively Sustainable Results

A case study on the use of the Periodic Service Review concept to improve the quality of vocational services provided to people with intellectual disabilities

Hamish Jones, IHC New Zealand, Inc., Ashburton, New Zealand

Editors' Note: In this article, Hamish Jones describes a very successful effort in transforming a traditional facility based day service to a community based service guided by consumer choice. In utilizing a PSR system as part of this effort, Hamish developed what we believe is a very powerful way of measuring outcomes. When Hamish visited us in California, he presented his work to our staff and we were immediately able to see its power and potential. Accordingly, after Hamish' article, we present a short article written by LeeAnn Christian, the new Director of STEP, our primary day service provision, giving an example of how we plan to apply Hamish' brilliant idea at IABA. We hope you find both articles interesting and of use.

The Periodic Service Review (PSR) as developed by the Institute for Applied Behavior Analysis (IABA) in Los Angeles, California, has played an integral role in the achievement of improved vocational services for people with intellectual disabilities in the township of Ashburton, New Zealand. Through the development of simple measurement criteria, combined with recording and feedback systems, the PSR has helped bring about significantly improved outcomes for both the individuals and the provider organization (LaVigna, Willis, Shaull, Abedi & Sweitzer, 1994).

Background

A review in 1996 of vocational services being provided to thirty-three people with intellectual disabilities in Ashburton, New Zealand, found that neither the individuals nor the organization providing the services were meeting their stated goals.

Prior to the review, services had been facility-based, with activities focusing on; Arts and Crafts (45%); Contract Work (35%); and Landskills (20%). Community inclusion was estimated at around 5% of service time. Opportunities were limited to what was offered.

Analysis of what Service Users were *wanting* out of vocational services was significantly different. The sum result of their requests were placed in broad Activity Groups with the intention that service directions would move to reflect the percentages listed; Recreation and Leisure (27%); Contract Work (25%); Arts and Crafts (19%); Personal Development, which related mainly to educationally oriented activities (17%); Supported Employment, which included all community-based work activities - paid or unpaid - with an external employer (12%). While there were still many requests that reflected opportunities that already existed, the inclusion of Supported Employment and Personal Development were seen to be significant developments.

It was subsequently determined that services needed to focus on identifying and achieving the vocational goals of individual Service Users, while recognizing the organization's philosophies of community inclusion and family involvement.

PSR

Because previous attempts to change service focus had resulted in the eventual return to the status quo, it was decided that a suitable means of measuring and controlling performance had to be implemented. The PSR was chosen because it:

- Monitored outcomes and processes on a monthly basis.
- Encouraged multilevel teamwork within the organization.
- Incorporated the use of simple visual feedback.

The PSR was developed in such a way that it would monitor the degree to which services moved towards the Activity Groups and percentages as requested by Service Users. It would also record the degree that the organizational goals of individualized service, community inclusion, and partnership with families were being achieved.

After an initial trial period, formal scoring began using the

monthly PSR Checklist in September, 1996. The Checklist covers areas that include:

- Service Users have current Day Service Plans, with quantifiable goals that were developed in conjunction with their families and friends.
- Day Service Plan goals are being actioned, and people involved in the planning process receive regular feedback on progress.
- Service User personal files contain current, easily accessible, and relevant information.
- Service planning and reporting is taking place
- Staff responsibilities are negotiated and their performance reviewed.
- Staff training is identified and actioned
- Management support is visible and easily accessible to staff.
- Adequate numbers of trained relievers are available.
- An Advisory Committee is in place and operating.
- Health and Safety issues are being addressed.
- Administrative requirements are met.

Computerised Database

To enable the accurate and ongoing assessment of the organization's performance in meeting its stated goals, a computer database was developed that would record the daily activities of each Service User. Starting in October, 1996, information has been entered into the computer on a daily basis through the use of a simple form. Each activity is coded against; its Activity Grouping; whether it is group-based or individualized; and whether it is community-based or not.

In an effort to encourage ongoing improvement in the quality of service provision, a further indicator is coded against all activities. This indicator was developed from the belief that just because an activity was *more* individualized or *more* community-based, did not necessarily indicate that it created better quality in the lives of the Service Users. Called the Community Participation Code (CP Code), a "quality" weighting is recorded against each activity as outlined in Figure 1, whereby the time spent on the activity is multiplied by the corresponding weighting, 1 through 8, to give a Community Participation Score (CP Score). Reports are generated on a monthly basis, and used by staff to analyze performance and take corrective action where required.

An example of the usefulness of this concept can be described in the analogy of a Service User who wanted to be involved in a regular aerobic exercise program. The goal could be achieved in many ways:

- A group could do exercises in the facility with staff support (CP Code 1).
- A group could do exercises in the facility with the help of a qualified aerobics instructor (CP Code 3).
- Staff could take a group to a commercial facility in the community (CP Code 5).
- Staff could support the individual at a commercial facility (CP Code 6).
- The person could attend a commercial facility supported by people from that organization (CP Code 8).

All of the listed situations would achieve the goal for the Service User. However the differences for the person through achieving the goal in the CP Code 8 situation as opposed to the CP Code 1 situation are significant.

Results

Due to the variables created by fluctuations in attendances and the available working days in any one month, the figures used to report on outcomes in the various performance areas are based on the percentage of total Service User time spent in any category for each calender month.

Percentage of Individualized and Community-based Service Time

Achievement of both individualized and community-based service delivery for the twenty-month period from October, 1996 through to May, 1998 is outlined in Table 1 and Figure 2 (see page 5).

Individualized service has ranged from a low of 33% in December, 1996 through to a high of 87% in December, 1997. The increase from 55% in October, 1996 to 65% in May, 1998 equates to an overall

Community Based				Facility Based			
Community Support		Staff Support		Community Support		Staff Support	
Individual	Group	Individual	Group	Individual	Group	Individual	Group
8	7	6	5	4	3	2	1

Figure 1 - Community Participation Codes

growth factor of 1.2 to date. The greatest period of growth in this indicator occurred over the first ten months to July, 1997, after which it stabilized at an average of 75% for the remaining ten months. The drop to 65% in May, 1998 is of concern, and corrective action has been taken to rectify this.

Community integration has ranged from a low of 19% of total Service User time in January, 1997 to 73% in March, 1998. The increase from 28% in October, 1996 to 68% in May, 1998 equates to a growth factor of 2.4 over the total period. It is significant to note that lessons learned from the "dip" in January, 1997, which is the period for summer holidays in New Zealand, ensured that the same trend did not occur for the equivalent period in 1998.

Recording the percentage of time spent in the community versus the percentage of time spent on individualized programs is particularly important, as these are the two main components that make up the CP Score. Through careful analysis, staff are able to take any corrective action needed to ensure the likelihood of continued growth in the overall quality of service provision.

Community Participation Score

The average CP Scores per Service User for the period October, 1996 through to May, 1998 are presented in Table 2 and Figure 3 (see page 6). The results show a continued trend upwards in the CP Scores for the period. The scores range from 2.5 in December, 1996 through to 5.9 in March, 1998. The increase from 3.1 in October, 1996 to 5.5 in May, 1998 equates to an increase of 77% for the entire period.

The initial goal of the organization was to achieve a CP Score above 4. This has been continuously achieved since August, 1997.

Through the use of the CP Score, the efforts of the organization have become focused, not only on achieving the Service Users' goals, but also the realization of services that are individualized, community-based, and supported by community networks.

Months	Oct-96	Nov-96	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98	Feb-98	Mar-98	Apr-98	May-98
% Time in Community	28	27	24	19	28	34	31	33	34	32	43	46	45	41	45	57	56	73	63	65
% Time Individualized	55	52	33	50	55	73	78	74	77	81	73	74	78	82	87	76	74	73	71	65

Table 1 - Percentage of Service User Time in Community versus Percentage of Time on Individualized Programs

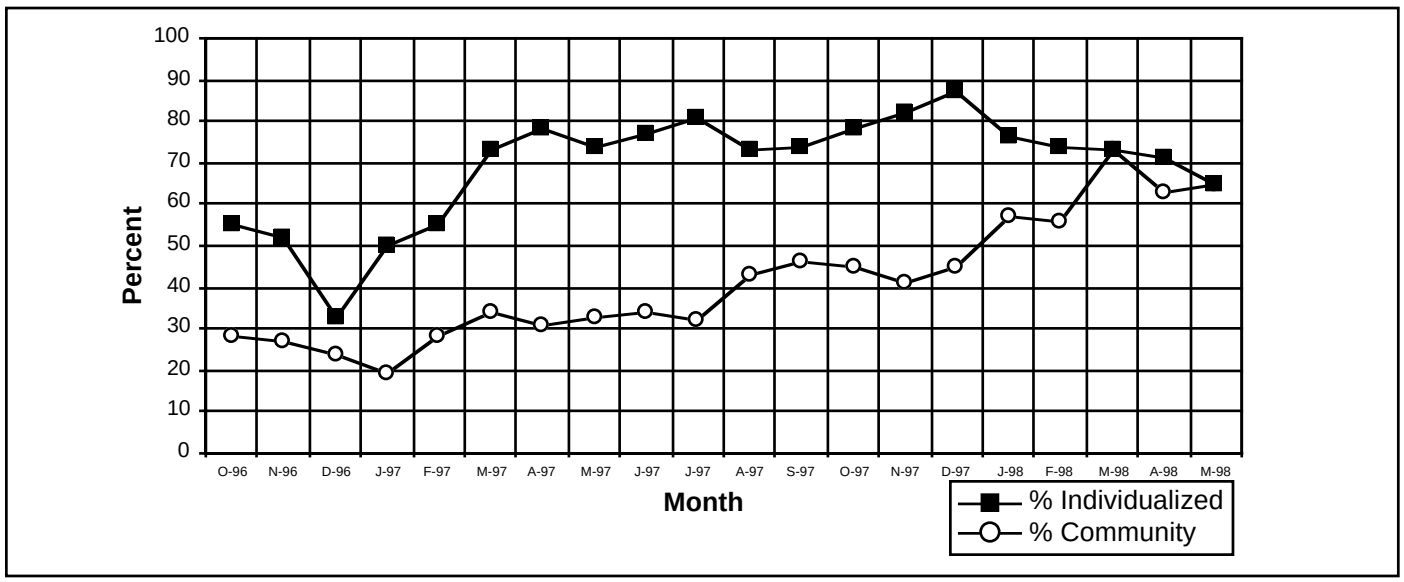

Figure 2 - Percentage of Service User Time in Community versus Percentage of Time on Individualized Programs

Activity Groups

Trends in the five Activity Groups (Arts & Crafts, Contract Work, Personal Development, Recreation & Leisure, Supported Employment) are monitored every three months as shown in Table 3 and Figure 4 (see page 7). Once again, the figures are based on the percentage of total Service User time spent in each grouping.

Analysis of the data shows that over the twenty months of the project, increases have occurred in the percentage of time spent in Personal Development (from 10% to 36%), Supported Employment (from 9% to 25%), and Arts & Crafts (from 5% to 6%). Decreases have resulted in the percentage of time spent in Contract Work (from 50% to 14%) and Recreation & Leisure (from 26% to 19%).

In the October-December quarter of 1996, the two Activity Groups that utilized the greatest percentage of Service User time were Contract Work (50%) and Recreation/Leisure (26%). By the January-March quarter of 1998 the two Activity Groups that utilized the greatest percentage of Service User time were Personal Development (36%) and Supported Employment (25%). These figures indicate a major shift in the type of activity being undertaken by Service Users in the twenty months covered by the project.

PSR Update

In February, 1997, an updated version of the PSR was introduced on the advice of Dr. Gary LaVigna, Clinical Director of IABA. This version includes several new standards; the most significant being the inclusion of standards based on the CP Score. For the first six months after the implementation of the second PSR Checklist, both versions were scored. This was done to reduce the likelihood of a lower score having a negative effect on the motivation of staff in the service.

The results of the monthly PSR scores from September, 1996 through to May, 1998 are presented in Table 4 and Figure 5 (see page 8). It can be seen that the organization has achieved a continual upward trend in achieving the standards it has set itself. Comparison of the months when both versions of the PSR Checklist were being scored shows that a greater rate of growth occurred in the second, more difficult, version.

Months	Oct-96	Nov-96	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98	Feb-98	Mar-98	Apr-98	May-98
CP Score	3.1	3.0	2.5	2.5	3.0	3.6	3.4	3.6	3.7	3.6	4.1	4.3	4.3	4.1	4.4	4.9	4.9	5.9	5.3	5.4

Table 2 - Average Community Participation (CP) Score per Service User

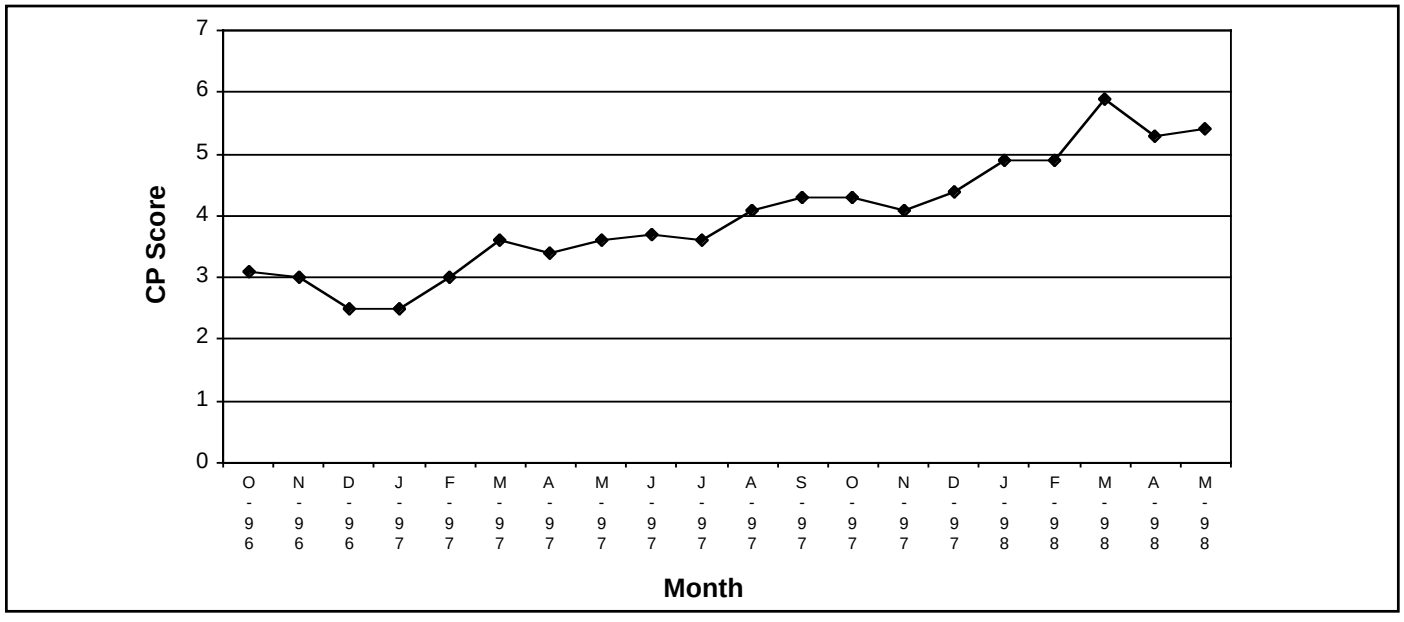

Figure 3 - Average Community Participation (CP) Score per Service User

Benefits Achieved

The PSR has helped bring about improved quality in the vocational services provided in Ashburton through encouraging:

- The development of clear organizational objectives.
- Communication between the organization, Service Users and their families.
- Updating of policies and procedures so they are unambiguous to all involved.
- Setting up of systems to record the daily activities of the service.
- Regular, objective, and positive feedback on the performance of the service.
- Making staff and management accountable for the results that are achieved.

Many other lessons have also been learned during the course of the exercise. These include:

- The realization that consumer-driven services in the disability sector can be made a reality.
- The importance of vision, commitment and leadership.
- That unsatisfactory service performance is more likely to be the result of poor management than the fault of hands-on staff.
- The importance of focusing on the retention of existing staff, thus ensuring the continuation of organizational knowledge, and the maintenance of positive long-term working relationships.
- That improved service performance does not have to cost more money. Detailed analysis of relevant data encourages resources to be focused where they can best achieve the desired results.
- The importance of community networks in the provision of ongoing support.
- That a culture of "quality" must be present in all levels of the organization for any significant growth to be achieved.
- As long as organizations continue to be "facility"

Time Period (d/m/y)	Arts & Crafts	Contracts	Personal Development	Recreation & Leisure	Supported Employment
1/10/96 to 31/12/96	5%	50%	10%	26%	9%
1/1/97 to 31/3/97	7%	41%	15%	25%	11%
1/4/97 to 30/6/97	8%	38%	22%	19%	13%
1/7/97 to 30/9/97	7%	37%	22%	19%	15%
1/10/97 to 31/12/97	8%	31%	18%	19%	24%
1/1/98 to 31/3/98	6%	14%	36%	19%	25%

Table 3 - Percentage of Total Service User Time Spent in Each Activity Group

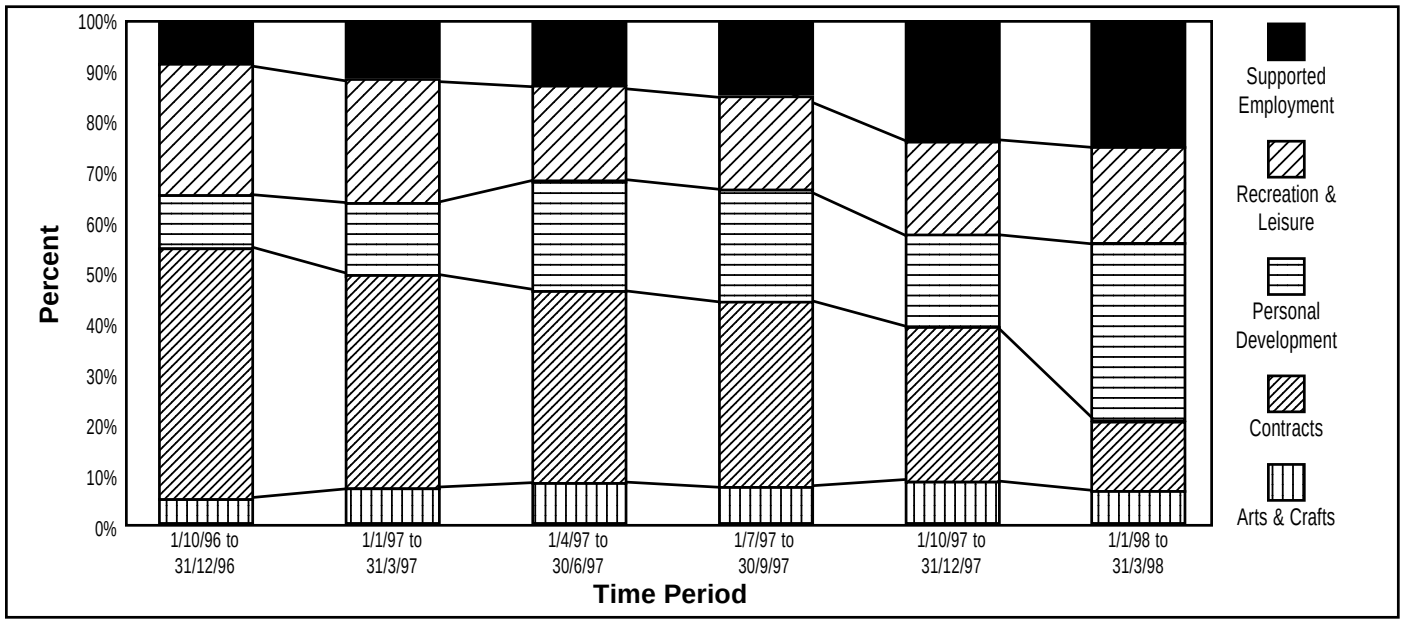

Figure 4 - Percentage of Total Service User Time Spent in Each Activity Group

based in their approach, there will always be a conflict with achieving the principle of community inclusion.
- That as Service Users have their initial goals realized, they appear to overcome their "learned helplessness" and request even more significant goals.

The Future

Following the success of the initiatives in vocational services, several further developments are planned:
- Implementing an updated version of the vocational PSR.
- Ensuring that all Service Users, irrespective of their level of disability, achieve equal opportunity of access to vocational options.
- Introducing the PSR concept to residential services.
- Updating the computerised database to improve the ability to monitor the achievement of Service User goals.
- Developing of a Consumer Feedback process to ensure that Service Users and their families are happy with the way the organization interacts with them.

Conclusions

Clear organizational objectives, the collection of daily data, and the PSR have played integral roles in the realization of improved outcomes for people with intellectual disabilities in Ashburton.

PSR has helped create a positive working environment that focuses on constant improvement. Service Users have increasingly higher expectations of success. Staff actively pursue objective feedback on their performance. It's all **P**retty **S**ensible **R**eally.

Months	Sep-96	Oct-96	Nov-96	Dec-96	Jan-97	Feb-97	Mar-97	Apr-97	May-97	Jun-97	Jul-97	Aug-97	Sep-97	Oct-97	Nov-97	Dec-97	Jan-98	Feb-98	Mar-98	Apr-98	May-98
Old PSR	34%	50%	72%	74%	77%	84%	86%	85%	91%	92%	92%										
New PSR						56%	60%	69%	72%	81%	81%	88%	82%	83%	83%	81%	83%	89%	89%	90%	95%

Table 4 - Monthly PSR Percentage Scores

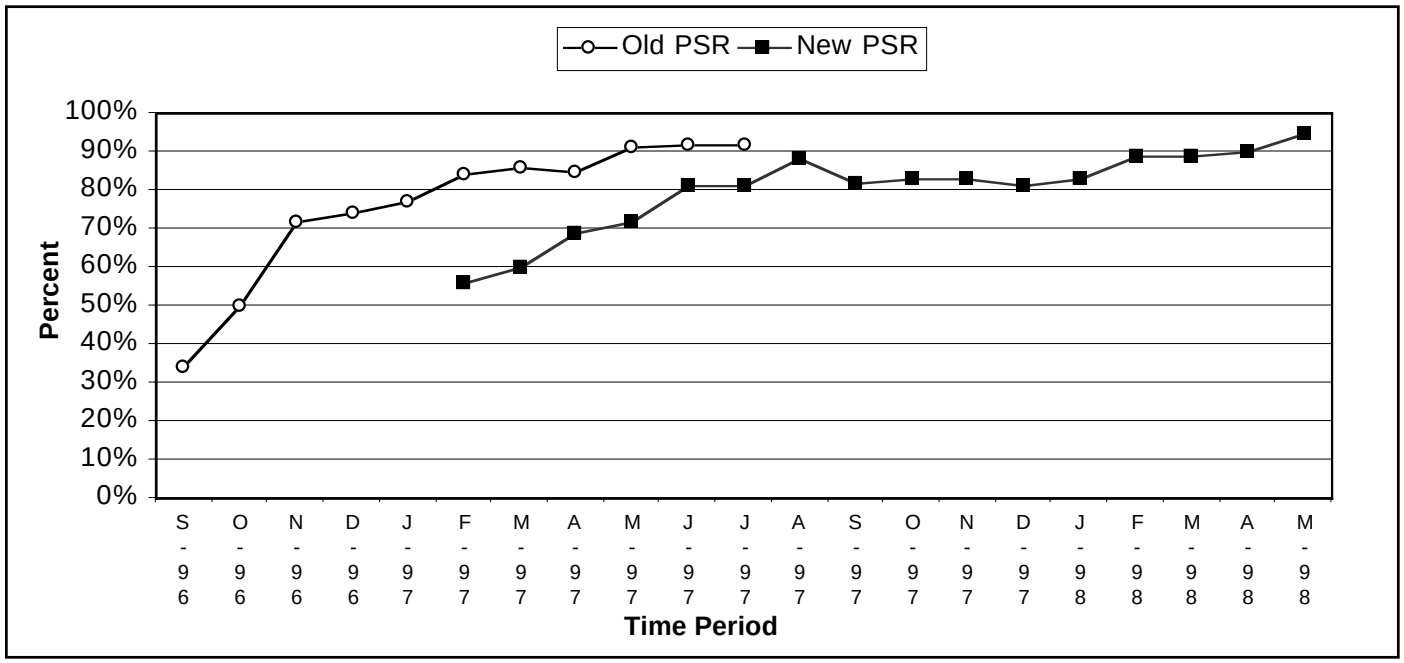

Figure 5 - Monthly PSR Percentage Scores

References

LaVigna, G. W., Willis, T. J., Shaull, J. F., Abedi, M., & Sweitzer, M. (1994). *The periodic service review: A total quality assurance system for human services and education*. Baltimore: Paul Brookes H. Publishing Co.

Footnote

The Organization and the Author

IHC New Zealand Inc. is the largest charitable organization in New Zealand, providing a wide range of advocacy and support services to people with intellectual disabilities and their families. It has an operating budget in excess of $110 million and employs more than 3,000 staff.

Hamish Jones has worked for IHC for nearly ten years, the last three as Area Manager in Ashburton, a small town in the South Island of New Zealand. Refer to Table 5 for information on contacting IHC or Hamish Jones.

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Table 5 - IHC Contact Address

The STEP Matrix

LeeAnn Christian, Institute for Applied Behavior Analysis, Los Angeles, California
Gary W. LaVigna, Institute for Applied Behavior Analysis, Los Angeles, California

Introduction

STEP has organized its services around a framework that captures the mission, vision and values that define our approach as well as the settings and nature of the services we provide. The mission of STEP is to support the people we serve in spending their days participating in the community, engaging in activities of their choice, enhancing their relationships with others, increasing their productivity and independence, and continuing to grow. The vision of STEP is that the people we support are working in paid employment, pursuing a career of their choice. The primary values guiding STEP are: choice, community presence and participation, natural supports, integrated paid employment, reducing the cost of public funding assistance, quality outcomes, responsiveness, collaborative relationships, growth, productive living, relationship building, respect, and dignity.

As illustrated in Figure 1 (see page 10), the STEP Matrix, our work with participants is structured around four levels of focus and is described below in detail.

Level A

Level A indicates three domains for where our participants might spend some or part of their six hour service day.

Community Participation

First and foremost, our goal is to have all the people we support spend as much of the day as possible participating in their communities. Community participation involves interacting with other members of the community and/or engaging in activities others in the community engage in. The emphasis in community participation is social integration. Examples of community participation include having a real job for a real paycheck, volunteering at typical local community organizations, taking a college class, attending the local fitness center, etc. STEP places a higher value on community participation than it does on just community presence.

Community Presence

Community presence, in contrast to community participation, may take place in a community setting (physical integration) but does not include social integration. Using the library as a setting for a social skills training session, gathering at the food court of a shopping mall to practice emergency skills, waiting for a bus, and waiting at a donut shop for the rest of their group to gather are examples of community presence but not community participation.

Non-Community

Finally, there are limited circumstances in which STEP services may be provided in a participant's home or in the STEP administrative offices. For example, we may be providing services to a participant who has been house bound, is temporarily non-mobile due to injury, medical instability, or other reasons, or simply to a participant who has a difficult time leaving the house in the morning. This may require us to spend at least part of the six-hour service day in her or his home setting, even as we try to support the person in spending as much of the day as possible in community presence and participation. Similarly, there may be limited circumstances when participants participate in a social skills training session or job club in our office setting, although even in these circumstances the goal would be for participants to spend as much time as possible in community presence and participation.

Summary

In summary, community participation is given greater value in the STEP Matrix than just community presence, which, in turn, is given more value than time spent in the participant's home or in the office. However, we are prepared to provide full support to participants for the full six-hour service day, regardless of the setting as dictated by individual needs and characteristics. Even under the circumstances portrayed in Level A, we continue to express our mission, vision and value by further delineating the quality of activities in which our participants engage. This is portrayed in Level B of the STEP Matrix.

Level																											
A	Home/Office								Community Presence								Community Participation										
B	Non-Instructional				Instructional				Non-Instructional				Instructional				Non-Work				Volunteer Work				Paid Work		
C	Others' Choice		Self Choice		Others' Choice		Self Choice		Others' Choice		Self Choice		Others' Choice		Self Choice		Others' Choice		Self Choice		Others' Choice		Self Choice		Others' Choice		Self Choice	
D	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support	Staff Support	Natural Support
Value Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

Figure 1 - STEP Matrix

Level B

Paid Work

Under community participation, our framework indicates that as a day service for adults, we value paid employment above all other possible activities, regardless of the level of support that individuals may need. This is so, even though STEP participants have not historically qualified for Department of Rehabilitation services nor have they otherwise been considered for paid employment because of the intensity or nature of the supports they need to enter or maintain employment.

Volunteer Work

Our next highest value is for our participants to spend as much time as possible engaged in productive volunteer work through which they can contribute to their community. An individual may participate in volunteer work if he or she is unemployed, employed part-time, employed in a temporary job, or employed in an entry-level job. Individuals in jobs meeting their career goals also may choose to participate in volunteer work.

Non-Work

Finally, if not engaged in paid or volunteer work, we value our participants' full participation in the community through a variety of integrated activities. Examples of such activities include; taking courses at a community college, attending the local fitness center on a regular basis, looking for paid work (for example, by attending a job fair or answering a classified ad), taking care of personal banking, shopping for personal or family needs, engaging in a leisure activity such as attending a professional ball game, taking a day trip to a museum, participating in an activity at their local church or religious affiliation, etc.

Instructional

When not participating but nevertheless present in the community, we hold it as a higher value for our participants to be engaged in instructional or constructive activities vs. non-instructional/constructive activities. Examples of instructional or constructive activities in the community that might involve community presence but not community participation would include social skills training at the local library or park, practicing emergency skills, looking through the classified section of the newspaper, reviewing a participants personal goals and plans while sitting at the food court of a local shopping mall and supporting a participant in planning their schedule for the coming week.

The same emphasis on valuing instructional activities extends to those limited times a participant might receive STEP services in non-community settings such as a in his or her home or at the STEP office. Examples of instructional or constructive activities at home might include learning how to dress or bathe, how to prepare a simple meal, how to place a "911" call, and/or how to do any domestic chore or independent leisure activity such as accessing the Internet, using the cassette player, etc. Examples of instructional or constructive activities at the office might include learning relaxation skills, a variety of social skills (e.g., how to say "no" or how to initiate and maintain a conversation), emergency skills, attending a personal planning conference, going through the classified ads in the newspaper, developing a resume, attending a job club meeting, etc.

Non-instructional/constructive

In contrast, non-instructional/constructive activities would include waiting for the group to gather, waiting for a bus, waiting for staff to complete an activity with another participant in the group, watching a movie, just laying out at the beach or in transition from one activity to another, hanging out while the Employment Specialist is coaching another participant. However, some of these activities may be considered instructional or constructive if the person needs to learn that skill. For example, if a person needs to learn how to wait for the bus to properly take the bus to and from work or other community activities, it would be considered an instructional or constructive activity.

Non-instructional/constructive activities at home or in the office would include watching TV, listening to music, eating, sunning oneself on the front porch, etc., or at the office, activities such as hanging around after an instructional session, reading a magazine, or waiting for a staff or for a ride to arrive.

Level C

Level C of the STEP Matrix illustrates that regardless of the activity in which the participant participates, it is considered of higher value if he or she has chosen to engage in that activity as opposed to the activity being chosen by someone else.

Self-Choice vs. Others' Choice

This dichotomy exists regardless of the activity. For example, with reference to paid work, is the person's job, the job of choice or one that fits squarely on the person's career path or is it one that is simply "paying the bills" or one that is filling the time until a better or preferred job comes along? Is the community activity in which the person is participating of her or his choosing or is it something chosen by another member of the group and the focus person is just "going along" as a member of the group? As a last example of how we value participant choice, an activity would be of higher value if it involved a skill the person wanted to learn, such as learning to play the guitar, as opposed to a skill that others thought was important for the person to learn, such as how to access community resources such as the fire department, police department, or dialing "911" in an emergency.

It is important to determine what an individual's choice is when he or she has limited communication skills and/or decision-making skills. Often, this is done by involving the individual's circle of support in an effort to ensure that the individual is participating in activities of his or her choice.

Level D

Natural Support vs. Staff Support

Level D of the STEP Matrix indicates that a staff supported activity, for example through a job coach or mobility trainer, is not as valued as an activity that is supported by the community, for example, by a co-worker, bus driver, unpaid friend or volunteer. Increased improvement in providing services through natural support might eventually allow the participant to qualify for competitive employment through Department of Rehabilitation services or, at the very least, allow us to reduce the in-the-aggregate-costs for providing services to those enrolled in STEP.

Conclusions

When we integrate the values expressed in Levels A, B, C and D, the STEP Matrix illustrates that we are able to put a value code of 1 through 28 on any activity for each period of a participant's six hour service day. The higher the number, the higher the value placed on that activity. In this framework, the activity given the highest value is paid work of the participant's own choice, supported without paid staff. The activity given the lowest value is staff supported, non-instructional/constructive, not of the person's choice, at the person's home or in STEP offices.

By developing the STEP Matrix, we are able to hold ourselves accountable to our participants, to the funding regional center and to our own Mission, Vision and Values statements. Further, we are able to maintain a profile of how STEP participants spend their day and to establish objectives at both the service level and individual participant level in the following ways. We plan to establish minimum performance against these objectives as outcome standards on our STEP PSR (LaVigna, Willis, Shaull, Abedi & Sweitzer, 1994).

1. Average value of activities in which participants participate.
2. Percentage of time spent in Community Participation vs. Community Presence vs. Non-Community Activities.
3. Percentage of time spent in Paid Work vs. Volunteer Work vs. Non-work.
4. Percentage of time spent in Instructional vs. Non-instructional activities.
5. Percentage of time spent in self-chosen vs. others' chosen activities.
6. Percentage of time with Natural vs. Staff support.

References

Jones, H. (1998). PSR: Progressively sustainable results. *Positive Practices, III,* (4), 3-9.

LaVigna, G. W., Willis, T. J., Shaull, J. F., Abedi, M., & Sweitzer, M. (1994). *The periodic service review: A total quality assurance system for human services and education.* Baltimore: Paul Brookes H. Publishing Co.

Continued from page 1

rate the work of Novaco's Stress Inoculation Therapy (1977), Kaufmann and Wagner's Systematic Treatment Technology for Temper Control Disorders (1972), Benson's (1986) approach to self-instructional training and problem-solving skills, as well as Personal Effectiveness Training described by King, Liberman, Roberts, and Bryan (1977). It is an effort to utilize the approaches which have appeared most promising for all populations, adapt them for use by persons with varying degrees of cognitive disabilities, and present them in a flexible group format that can be adjusted to the participants' abilities and learning style." Hence, "this program is an eclectic blend of various anger management strategies that has been successfully used with children, adolescents, and adults who possess the following prerequisite skills:

1. The ability to attend in a small group setting (4 - 8 participants) for at least fifteen minutes at a time.
2. The ability to receptively and expressively communicate verbally, with signs or pictures or through a communication device" (McLain & Lewis, 1998, p. 10).

The sessions follow a logical progression and continue to develop and expand on the skills learned in each of the previous sessions. The list below gives a brief description of each session to assist in orienting the reader to the detailed descriptions that follow.

- Sessions 1 and 2 — a rationale for learning to manage one's anger
- Sessions 3 and 4 — participants begin to learn the fundamental skills required for anger management
- Session 5 — the participants learn the physiological cues that are present when one becomes angry
- Session 6 — serves as a review for the previous sessions
- Session 7 — focuses on the advanced cognitive-behavioral aspects of temper control
- Session 8 — assertiveness skills are taught with a special emphasis on discriminating assertiveness and aggression
- Session 9 — explores problem-solving techniques including outcome evaluation strategies
- Session 10 — the more subtle aspects of assertiveness skills are developed
- Session 11 — serves as a review for all of the previous sessions and offers participants an opportunity to set their own personal goals for anger management

It should also be noted that the curriculum has been successfully used to provide ongoing training and support to individuals with disabilities. The sessions can be broken into smaller parts and/or repeated in order to ensure practice and mastery of the skills.

Session 1: Rationale for Training

Why is it Important to Learn to Control Your Anger?

This discussion should focus on problems created by poor anger control. Discuss each of these facts with the group.

- When people lose their jobs it's usually because they can't get along with their boss or co-workers, not because they can't do the work.
- If you hurt someone and the police are called, the person you have hit may wish to press charges, which can result in you having to go to court. If it has happened before, you may be asked to move to a different place. If you get really mad and are hurting people, you may have to go to a special hospital called a psychiatric facility.
- You may lose friends or relationships. Your family may not want to spend time with you. People may not want to be around you. This can be very lonely.
- You can lose your job and lose the chance to get a new job. If your boss fires you because you fight with others, it may be hard to get another job.
- You may be kicked out of school for a few days (suspension), or be sent to a different school (expulsion) if you can't get along with others around you.
- You may not be allowed to continue to ride a bus independently if you have problems with your temper while you are riding the bus. This cuts down on your independence.
- People who stay angry may get sick more often and may even die at a younger age. Getting angry is hard on your body.
- When you yell a lot or hit others you might have to move out of places where you like to live.

- Most of you have decided you want to have a happier, better life by learning ways to control your anger and solve problems better.

Exercises

Have individuals list and discuss events in their lives in each area, which have been affected by their anger:

- School
- Transportation
- Legal
- Friends
- Jobs
- Relationships
- Roommates
- Family

Homework

List the things that happen this week that make you feel angry and write down or dictate how you handled them. Use this format:

1. Date _____
2. Time _____
3. Situation _____
4. What You Thought and Did _____

Notes to the Group Leader

Provide practice for the homework assignment in class by demonstrating from your personal life an event you might include on the worksheet. Have each individual complete at least one entry and assist as necessary. Fade prompts so that the individual is able to demonstrate independent completion of an item.

Contact the key social agents in the participants' home, school or work environments and share with them any pertinent information, which came out of the first session. Give them information about the homework assignment, and ask them to provide social reinforcement to the group member following daily completion of the homework.

Session 2: What is Anger?

About How This Group Will Work

Explain how the group will be structured with discussion and group role-playing. Let people know that in the group they will have the opportunity to talk about things that bother them. Set up ground rules for turn taking and interrupting in-group discussions.

Explain the idea of confidentiality of information shared in the group. Information about other group members is not to be shared outside of group without their explicit permission. The group leader, of course, has these same confidentiality and additional reporting responsibilities. Explain that there may be visitors to the group who will participate in the role-play sessions and that they too are bound to strict confidentiality. None of the "barbs" discussed in the group are to be used outside of the group unless there has been a clear agreement among the involved member(s) and the group leader for this to happen. The group leader may not share specific information about the participants without their permission, unless the group leader is aware of a situation of potential harm or abuse. The group leader must follow guidelines for mandated reporting of suspected abuse.

The group is here to learn how to manage anger. No person will produce perfect responses in each role-play or group discussion. Therefore, criticism, teasing or ridicule has no place in the group interactions (unless structured in a "barb" role-play situation). Group members should practice finding positive qualities of each person's participation. This is how people will learn best.

Anger is a Normal Part of the Range of Human Emotions

Discuss the differences between anger and aggression.

An emotion is a feeling that we have. Can you name some emotions? Anger is a human emotion that is not by itself "bad." It can help save our life if we are in danger. Anger can help us work to change the things that make us mad. Anger is a problem when we get so mad that we hurt people by hitting them, yelling at them, or saying things we don't really mean. Aggression is the way some people show angry feelings. Aggression includes yelling at people, hitting, kicking, telling people that you are going to hurt them, pouting, or going off by yourself. Aggression does not solve problems. It often gets people into trouble and makes people lose friends, lose help from their family and their teachers, lose their job, etc.

This group is here because you can learn to control your anger and learn better, more effective ways to

solve problems than getting angry. This does not mean that you will never get angry after you are part of this group. You may learn how to control your anger so that you can solve problems in ways that are more positive for you and the other people in your life. When you learn to control your anger, you will learn to understand better what it was that made you mad.

One of the best ways to learn these skills is to watch other people control their anger and solve problems with words, and then practice in this group and most importantly, practice in your everyday life.

Lots of people who find it hard to control their anger believe that it is always someone else's fault when they get mad. When people talk about what made them mad they usually "point the finger" at someone else or find someone to blame for their anger outburst. In this group you will hear over and over again that YOU ARE RESPONSIBLE FOR YOUR OWN FEELINGS AND YOUR OWN BEHAVIOR. You are not responsible for anyone's feelings or behavior.

Exercises

Do a responsible statement exercise where each group member asks another member, "Who are you responsible for?" The desired response is "Myself." The person who responds then asks the question of someone else. Ask group members for situations when people interact and quiz group members about whether these people are taking responsibility for their behavior or the behavior of others. Check the homework from the last session and allow group members to share part of their homework if they want to. Allow some time for discussion of the situations that came up during the week for group members. Identify situations, which illustrate the issue of personal responsibility.

Notes to Group Leader

In the second exercise, encourage and prompt the use of real-life situations of which you are aware. These situations may occur just prior to or during the training session, as group members interact informally with each other, or may come out of participants' homework assignments. In both exercises, model the desired behavior only as necessary. As group members demonstrate competence with the exercises, throw in "error responses" and see if group members are able to identify them. If not, have the other leader model a response to the "error response." Check in with the key social agents (within the limits of confidentiality) regarding any challenging situations that may have come up for the group member during the week. See if the member's report matches the report from the key social agent.

Session 3: Identifying Antecedents

What are "Antecedents?"

Antecedents are the things that happen, inside you or outside of you right before you have a temper outburst. An antecedent might be something that no one else can see (internal) or something that other people can see (external).

Has anyone ever seen a barbed wire fence? (Draw a picture). The barbs are the little prickles on the fence. If you touch them they can poke you or hurt you. In this class, we call barbs the things that happen just before we get angry. Barbs are things that may hurt us or make us feel angry. They may be things people say like somebody telling us we haven't done a very good job, or they may be things we tell ourselves inside our head, like "he's not going to get away with that."

Examples of internal events: pictures in our minds, things we say to ourselves, or physical feelings such as menstrual cramps, sore throat, tiredness, tight muscles, breathing quickly, upset stomach, fast heartbeat, etc.

External events are things that people do (actions), words, or other things that happen around us that we can see and feel. Some examples from the social environment are a teacher telling you that you did something wrong, your mom or dad asking you to do something, a friend making a face at you, a stranger swearing at you or giving you the finger, etc. Examples of antecedents or barbs from the physical environment might include being in a room that is too hot or noisy, breathing polluted air, etc.

Why Identify Antecedents to Angry Outbursts?

People who get mad easily get mad when certain things happen. It may be hard to be told that you have done a bad job or to be told to do a job that you don't like. It may be confusing to be told to do different things by two different people, etc. Usually the things that upset people are different for each person. Some-

thing that doesn't bother one person may easily upset another person. Sometimes it depends on the day or time. Something that doesn't bother you one day might bother you on another day. The purpose of this next exercise is to find out exactly the things that people say or do that make you get really angry.

Exercises

Make a list of things people have said to you that make you angry. Include who says them, where, when, and the way that they say them. The instructor may need to help with this list. It could be written on a large sheet of paper that is taped to the wall. *Put the items that make you most angry at the top of the list, and so on, to the things that make you less angry.*

Make a list of the things you say to yourself or things you see in your mind when these things happen. For example, you may say things like:

- "He can't talk to me that way."
- "That isn't fair."
- "I never get what I want."
- "People never see things my way."
- "I'm going to get even."
- "I'm going to punch her in the nose."
- "That jerk."

These types of statements are "trouble" statements that we will learn to change into "coping" statements. For now it is most important to recognize when you're telling yourself these types of things and then stop them. These self-statements will *not* help you to control your anger and they may make you more angry or lead to more trouble in your life.

Homework

Write down the date, time, and barb anytime that you get angry this week. This is like the homework that you did before. If you would like to use a tape recorder to record this information or if you need for someone to help you do this, talk to me after the session.

Notes to the Leader

It may be easier for people to put their barbs in order if each one is written on a 3-inch by 5-inch card. Often what is the strongest barb at one time will not elicit as strong a response even at the very next meeting. By putting the barbs on cards, the participants can re-order them according to how they are feeling each session. The experiences that they have had during the time between sessions may influence the order of their barbs. Check to see if what the participant reports as their barbs fit with the information that you have collected from key social agents. If you notice any striking differences, it may warrant further investigation and/or direct observation. The group leader should again model the homework exercise with a clear example. People who are unable to read or write may use a tape recorder or pictures, or may narrate their barbs to someone else who is able to write them down.

Session 4: Relaxation Training

The following is an abbreviated version of Jacobsen's Progressive Muscle Relaxation. Since the most important aspect of relaxation is that the individual can use it unnoticed, in any environment, this procedure will always pair the sub-audible cue of the word "relax" with each exhale during the relaxation. The goal is for individuals to be able to relax without having to tense each muscle group. When the sensation of relaxation is consistently paired with the word relax, the word will begin to induce relaxation by itself.

When narrating these exercises always 1) pace your instruction (a slow presentation will allow time for deeper relaxation and may have a slightly hypnotic effect); 2) have the individual breathe deeply following the tension release, hold the breath, and say "relax" to him/herself.

Sit so that you are comfortable. Rest your hands on your lap, palms up. Focus on your hands. Make a fist with both hands, like this. Hold tight. Now relax and open your hands. Relax each arm completely. Let your arms feel very heavy. Now relax them some more. Take a deep breath and "relax."

Now focus on your shoulders. Hold all of the muscles in your shoulders very tight, like this. Now even tighter. Now relax and let your shoulders hang down, very heavy. Take a deep breath and say "relax" to yourself.

Focus on your neck. Move your head a little bit forward and up. Hold it until you can feel your neck getting tight. Now let your neck relax and breathe deeply.

Focus on your face. Squint your eyes. Wrinkle your nose. Clench your teeth. Tighten your mouth. Hold

tight. Relax. Relax your eyelids, letting them feel very heavy. Relax your cheeks, and lips, forehead. Take a deep breath, and say "Relax" as you exhale.

Focus on your stomach. Make your stomach tense by lifting your feet a little bit off the ground. Feel the tense feeling. Hold it. Now let your feet down. Relax, take a deep breath and say relax as you exhale.

Focus on your back muscles. Tighten your back by sitting up very tall and pulling your back away from the chair. Hold it. Now sink down and relax. Take a deep breath and relax even more. Breathe deeply and each time you exhale feel yourself sink just a bit deeper into relaxation than before.

Now focus on your leg muscles. Point your toes and tighten all the muscles in your legs. Hold it. Now relax your toes, let your legs hang down and let all the tension just melt away. Practice deep breathing on your own.

Now take a minute and see if you can let your entire body relax as completely as possible. See if you can find any tension in your body and simply release it. Let it go and continue to deep breathe, relaxing just a bit deeper each time you exhale.

I am going to come around and see if you are really relaxed. If you are very relaxed, your arms and legs should feel like noodles that have been cooked, soft and floppy. I will try to lift your arm. If you are relaxed, it should be very heavy for me. If your arm does not feel relaxed, I will have you try to lift my arm and I will show you what a relaxed arm feels like.

Exercises

Practice relaxation in identified role-play situations without having to use tension/release. Use real-life items reported in participants' homework.

Now we're going to use these relaxation skills. I'm going to give each of you a barb. As I give you the barb, I want you to tell yourself "relax" on the inside, take a deep breath, and let yourself completely relax. When you feel very relaxed, answer me.

Now we'll practice using relaxation when you get more than one barb all at once. I'm going to give each of you more than one barb. I want you to keep practicing relaxation as you answer me.

Homework

Practice relaxation the way we did in class today (tension/release) until you can become very relaxed without having to tighten each part of your body (i.e., skip directly to the "release" part). You will know that you are very relaxed when your arms and legs feel very heavy.

Notes to Group Leader

Make sure that you are training relaxation in a conducive setting. It should be quiet, with dim lighting if possible, or outdoors in a quiet area. Group members should be seated comfortably or stretched out on mats or grass. There should be no interruptions.

Ask group members to notice, during relaxation if there are any parts of their body, which are particularly difficult to relax. Have them direct their attention to those areas until they are able to relax those areas too.

Communicate with key social agents and, with group members' permission, invite them to specific meetings. Share the current barbs that the person is working on, and their progress with relaxation training. Ask the key social agent to allow the group member to practice relaxation with them and to show them what they have learned following this session. Ask the key social agent to provide positive social reinforcement to the participant when they are observed to demonstrate the use of relaxation techniques, especially under stressful conditions. Perhaps the participant can teach a family member how to do the relaxation exercises.

Session 5: Recognizing Body Cues

Review of the Internal Antecedents Identified in Session 3

Today we are going to help you learn to find the things that happen inside your body when you are just starting to get angry. When some people get angry, they feel their muscles get tight and hard. Other people feel their heart start to pound or they clench their teeth together very tightly. Everybody is different. I want you to find out what happens when you get angry.

Exercise

Have the group members practice the relaxation response and develop the deepest state of relaxation possible for each individual.

When you are very deeply relaxed, lift your finger to signal me.

I am going to come around to each of you and

describe the thing that you said made you most angry. Pretend that this is really happening to you now. As you think about it notice what happens to your body. Are any muscles getting tense? Is your stomach getting upset or tight? Is your heart beating faster? Is your jaw tight? Do you feel like you are getting a headache?

Repeat the exercise several times for different scenes. Use real-life situations that have been reported in homework or in members' barb lists.

Survey the members of the group after having them open their eyes and have them describe the sensations they experienced. Write them on a blackboard or a large sheet of paper and draw pictures.

Use the most salient body responses as a cue to begin a self-control procedure:

- Anticipate conflict situation
- Relax...make self-control statements

START

BARB
1. Catch any body tension and relax.
2. Catch "trouble" statements. Replace with coping statements.
3. If person is angry, actively listen.

PROBLEM SOLVE
1. What is situation?
2. What can I do?
3. What will happen if I do this?

SELECT BEHAVIOR
1. Continue active listening
2. Make "I" statements,
3. Make direct request for change
4. Ask for time to think about it.

EVALUATE HOW YOU DID
1. Did you stay relaxed? Good!
2. Did you catch and eliminate trouble statements? Nice job!
3. Did you make an assertive statement? With neutral voice tone? With non-threatening posture?
4. Are there any things you would change if you could do it again?
5. Congratulate yourself on the things you were able to do well!

Figure 1 - Anger Management Flowchart

Draw the flow chart for anger management (Figure 1) for those persons who are able to read. Use pictures instead of words for those persons who are not able to read. Proceed up to the point where the person identifies their bodily response, makes a coping or self-instructional statement and then relaxes.

Present group practice exercises by narrating various real-life scenes for the group and follow each scene with group discussion about identifying internal cues, making self-coping statements and relaxing.

Notes to the Leader

Some people may have difficulty identifying their body responses. It may help them if you can give them observational feedback such as, "I notice that your face gets very red when you seem to be upset about something. What happens inside when that happens?"

Discuss physical manifestations of tension and stress such as headaches and stomachaches.

Explore the use of soft, slow music before, during, and after relaxation exercises. Talk to the group about how certain kinds of music may create certain moods and feelings and how they can use music to lower their arousal level or to stay relaxed.

It may be a good idea to discuss and record other relaxation and coping strategies that people have found helpful such as taking a warm bath, going for a walk, talking with a friend, eating a bowl of warm soup, etc.

Session 6: Review

Session 1 - Rationale for Training

- Anger in itself is not "bad."
- How we handle anger determines whether it is a problem.
- Each individual is responsible for his or her feelings, and behavior.
- Uncontrolled anger can create many problems in school, work, home and social environments. Review some of the individual challenges that each person has had.

Session 2 - What is Anger?

- Review of anger diary

Session 3 - Identifying Antecedents

- Review with the group what barbs are, what each individual's barbs are, and why we are tracking them.
- Review with each individual member what are the specific "trouble" statements they have identified.

Session 4 - Relaxation Response

- Review relaxation procedures and practice in-group.
- Review applications in real life.

Session 5 - Recognizing Body Cues

- Review body cues that anger should be managed, and practice with exercise from previous session.
- Review anger diary for information on body cues.
- Review the flowchart up to this point and practice exercises used in previous sessions.

Session 7: Recognizing Self-Statements

Recognizing "Trouble" Statements

"Trouble" statements happen when you say to yourself how unfair a situation is, or how another person is wrong. Some words that are a signal that it may be a trouble statement include "always," "never," "everyone," and "no one." Describe how making trouble statements will interfere with the individual's relaxation, recognizing internal cues, and problem solving.

"Coping" statements happen when you say to yourself something that helps you feel better and solve a problem, like "That person is probably just having a bad day. I can handle this."

Exercise

See if you can tell which of these statements is a "coping" or "trouble" statement:

- "That guy is such a jerk."
- "Nobody likes me."
- "I'm starting to get mad but I'm going to handle this like a pro."
- "If I punch him it won't solve the problem and I'll just get in trouble."
- "She is always telling me what to do."
- "Yep, this person wants me to change the way I work."
- "If she says another word I'm going to scream."
- "How could he be so stupid."
- "Hmmm…I wonder how I could deal with this situation."
- "I hate him."
- "Time to take a deep breath and use the old noodle."

Review of Previously Identified Self-Statements (from Session 3)

- Determine if they are "coping" or "trouble" statements.
- Save the statements that are coping statements.
- Decide what new coping statements could be used to replace the old "trouble" statements.
- Make a personalized list of coping statements that each participant will practice in a role-play.

Exercise

Making self-statements: *I want you to pretend that* _____(describe antecedent) *is happening with* _____(group member's name), *and when she gives you the barb, I want you to say what you were thinking out loud* (insert individual's selected statement). *Ok?*

Provide any positive or corrective feedback and have the person immediately repeat the role-play, saying the coping statement silently.

Notes to Leader

Use a situation from real life for the exercise. Ask other group members to act as observers and to give their feedback, too.

Check in again with key social agents. Find out if they are seeing any changes in the group member's behavior. Let them know how the person is progressing in the group. Enlist their assistance if the person needs additional practice on any specific part of the program up to this point. Ask the key social agent to model some coping statements for the participant in the natural setting.

Session 8: Assertiveness Skills I

What is Assertive Behavior?

Assertive behavior is 1) figuring out what your own feelings are (e.g. anger, admiration, sadness); 2) figuring out what are the behaviors of others that you would like changed; 3) asking directly for change in a way that keeps your rights and respects the rights of others. People have the right not to be yelled at, threatened or ridiculed.

Exercise 1

Discrimination Training: Assertive vs. Aggressive responses

Group leaders should model examples of assertive or aggressive behaviors along these parameters, having individuals identify what element is being demonstrated and whether it is assertive or aggressive behavior.

- Posture
- Tone of voice
- Facial expression
- Verbal content

Active Listening Skills

These skills will help you by slowing you down so that you don't say or do anything before you have decided how you really want to handle the problem.

It is important not to interrupt when another person is talking, especially if the other person is angry.

Restate the problem in your own words to insure that you understand what the problem is.

Exercise 2

Now let's put everything together. We'll do relaxation, find a nice tone of voice and put a pleasant expression on your face, and use good listening. I'm going to take one of the barbs and give it to you. When I say _____, I want you to take a deep breath and relax, then restate what I say the way that we practiced before. Make sure you don't sound or look angry. We will tell you the good things that you do. Everybody will have a chance to practice this many times, because it is very important.

We will work on what things to say to solve the problem in the next few sessions.

Notes to the Leader

If possible, videotape this session. After the session, edit the videotape so that you retain the best demonstrations of the target behaviors. Do some additional videotaping in natural settings, attempting to capture similar behaviors by the participants or by people they know. Plan to view the videotape and allow time for discussion in an additional session or at the beginning of the next session.

Talk with the key social agents about reinforcing assertive behavior, even if the group member is making a choice that the key social agent may not agree with. Encourage the key social agents to give specific praise for the target behaviors listed above as they occur in natural settings. It may be necessary to do some attitude assessment and education with key social agents about individual rights and the importance of teaching people to make choices and the key social agent's responsibility to respect those choices.

Session 9: Problem Solving Strategies

What to do When You are Having a Problem

This session will focus on selecting a behavioral response to provocation. Use the antecedent information from previous sessions to practice this.

Ask yourself the question "What is the problem?"

Then ask, "What can I do?" Think of at least three different ways you could handle the problem.

Then ask "What will happen if I…?" and decide which is the best thing to do. Pay special attention to things that you could say or do that might cause more trouble instead of solving the problem.

Then choose a plan that will not make the situation worse and that is most likely to get you what you want. Try out the plan.

How did you do with your plan? Did you get what you wanted? Did you get something that works for you and for the other people around you?

Exercise

I want each of you to think of the barb that is on the top of your list today. Think of at least three different ways you could handle the situation. We will talk about them with the group and you can decide which the best option is. You may get some ideas from

listening to how other people handle their barbs.

Homework

Find situations where you can use these skills and practice them over the next week. Bring back a story about your experience to share at the next session.

Notes to the Leader

Refer to the flow chart in Figure 1 for the steps of the whole process. For the people in the group who cannot read, use a picture flow chart with symbols representing the steps listed in Figure 1.

Individual role playing will occur with the group, or in pairs coached by the group leader utilizing direct instruction, modeling, behavior rehearsal, feedback, shaping and positive reinforcement (see Figure 2). Some people might have difficulty thinking of three different ways to handle a situation. Try two first. This is an important session in which to have key social agents participate. They need to be aware of the skills the individual was practicing in the sessions.

When possible, conduct practice sessions in the actual environment where the individual tends to have problems. This may be done when other students or individuals are not present if that is more comfortable for people.

Session 10: Assertiveness Skills II

Review Session 7 Skills

Discriminate assertive from aggressive responses (practice with various role played responses in-group).

Practice relaxation during provocation (practice with antecedent information identified previously).

Practice active listening (practice with antecedent information identified previously).

Exercise: Handling Angry People

Today we're going to practice what to say to people when their behavior makes you angry. This is a way of asking them to change their behavior after you have stayed calm and actively listened to their complaint.

Describe something you like about the way they treat you. For example, "I like it when you tell me what is bothering you."

Make an "I" statement about how you feel when

1.0 INSTRUCT
- 1.1 RATIONALE - Give a rationale to the individual for working on the target behavior. Explain the specific behavior's usefulness and how it may be used to avoid or solve problems or "get things you want." Describe the "modeling" procedure as a way of "showing" the individual exactly what you want her to do.
- 1.2 DESCRIPTION - Describe the stimulus situations in which it would be appropriate to use the target behavior. Describe how the behavior should look and/or sound when it is successfully learned.

2.0 MODELING
- 2.1 INSTRUCT - Have the individual observe you as you demonstrate the behavior with another person.
- 2.2 REPEAT-Repeat the demonstration several times pointing out an important aspect of the target behavior after each demonstration. You should draw attention to things such as voice volume, content, eye contact, and tone of voice and posture (including the use of the hands).

3.0 BEHAVIOR REHEARSAL
- 3.1 DESCRIBE - Reiterate the stimulus condition you will present that should cue the individual to emit the behavior.
- 3.2 PRESENT - Present the stimulus and, if necessary, prompt the desired behavior.

4.0 FEEDBACK
- 4.1 SHAPE - Point out the positive aspects of the performance, citing all correct components performed. Omit description of undesirable aspects of the behavior. Use short statements containing one aspect of the target behavior at a time.
- 4.2 INSTRUCT - Ask the individual to repeat the performance and give instructions for correct behavior where the performance was lacking. You do not need to describe how the performance was inadequate.
- 4.3 RECYCLE - If necessary model the desired performance again by recycling back to step 2 until the response closely resembles the target behavior. At this point move to step 5 for generalization.

5.0 GENERALIZE
- 5.1 ANTECEDENTS - Introduce the stimulus settings requiring the target behavior that were identified in the assessment. Begin with the least anxiety arousing situations and proceed to more stressful settings. This may include new persons presenting the discriminative stimuli, or slight variations of the original stimulus setting.
- 5.2 RECYCLE - Repeat steps 2-5 as needed during the generalization programming. When all stimulus settings reliably elicit the desired response move to step 6.

6.0 MAINTENANCE
- 6.1 INFORM - Be sure all of the key social agents in the individual's environment are aware of the new target behavior so the behavior can be reinforced when it occurs naturally.

Figure 2 - Using Modeling and Behavior Rehearsal

they do _____. *Do this without blaming them for how you feel. Your feelings are your responsibility.*

For example, "I feel nervous when your voice gets louder."

Nicely tell them how you would like them to treat you. Don't demand. For example, "I would like it better if you could talk to me with a quieter voice."

Putting this together

Here is something that you might say if your boss corrected you in front of your co-workers:

"Ms. Jones, when you tell me I'm doing a good job I really appreciate it but when you tell me I'm doing it wrong, especially in front of other people, I feel embarrassed and a little angry. Could you please talk to me alone if I'm doing something wrong?"

Have participants identify situations from their own list of barb situations and practice including each of the three parts. The group should provide positive feedback on correct portions of each person's performance.

Notes to the Leader

Find out what current real-life situations fit into this training topic. If possible, role-play these, then actually go out and coach the participant through a real interaction with someone in the natural setting. Prompt only as much as necessary to assist the participants to solve a problem in an assertive way. Then come back to the group and talk about how it worked or didn't work and what might be done differently the next time.

Contact key social agents and communicate about the progress of group members on the current topic. Ask that they provide positive social reinforcement for demonstration and practice of the target behaviors in natural settings.

Session 11: Review

Putting it all Together

Review the flow chart combining all of these components and practice using antecedent information in role-plays.

Preparation: Prepare for the situation using relaxation, coping, and planning statements.

Use body cues (tension, nervousness) to relax and change trouble statements to coping statements.

Use problem solving; anticipate probable outcomes of choices:

You may choose any one or more than one of these ideas to use: Active listening, making "I" statements, describing the other person's positive behaviors, describing the behaviors you want changed, and making a direct request for behavior change. You may ask for more time to say or do something. If you feel like you can't control your anger you may go to another place so that you can practice relaxation and assertive responses.

Evaluate performance in positive terms and identify things to alter in future conflicts.

Ask group members to choose one or two specific goals for themselves, relative to the implementation of what they have learned in the program.

Encourage group members to share their learning with others. Often group members report that other people in their environment have difficulty managing *their* anger. Demonstrate some non-threatening ways to offer assistance to someone else who needs to learn to manage their own anger more effectively.

Notes to the Leader

If possible, arrange to observe the group members in a variety of natural settings and at different times. Let the members know that you will be stopping by to see how well they remember and use what we have been working on. Give group members feedback during observations when you see them using target behaviors effectively.

Use the observation time as an additional opportunity to communicate with others in the participant's life about their goals and progress and about ways that key social agents can help the person work toward their goals. Find out if key social agents have noticed any changes in the member's behavior during the course of the program.

Encourage the group members to continue to keep track of the things that make them angry and their response. You may be able to teach some people how to graph their own behavior and monitor their continued progress. They may wish to keep a written diary, draw pictures, or tape record the situations and how they solved the problem.

Throw a party! Celebrate group members' graduation from the program. Do something fun together. Pass out diplomas. Instill and share a sense of accomplishment.

Conclusion

This curriculum is designed to be used in a flexible, creative manner. Sessions can be expanded and adjusted to fit particular needs. The curriculum has been successfully utilized with groups of varying sizes and across different settings (work, home, school, community). It is most effective when elements from an individual's whole life are included and when issues are explored from all of the environments and contexts in which a person spends time. Outcomes that participants have experienced include reductions in temper outbursts, increases in self-control and coping skills, and the formation of meaningful relationships among group participants.

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Resources

Training Calendar

Assessment and Analysis of Severe and Challenging Behavior
Gary W. LaVigna & Thomas J. Willis

This competency-based training practicum provides participants with the clinical skills required to design and implement person-centered multielement nonaversive support plans.
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Gary W. LaVigna & Thomas J. Willis

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February, 1999 - US Seminars (Concord, CA)
March, 1999 - US Seminars (Chicago, IL, Portsmouth, NH) Canadian Seminars (Calgary, AB)
May, 1999 - UK Seminars (Glasgow)
June, 1999 - US Seminars (Orlando, FL)
July, 1999 - US Seminars (LosAngeles, CA)

Other venues will be arranged and announced at a later date. For detailed, current information on any seminar, contact:

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Alternatives to Punishment: Solving Behavior Problems with Nonaversive Strategies

G.W. LaVigna & A.M. Donnellan

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The Behavior Assessment Guide

T.J. Willis, G.W. LaVigna & A.M. Donnellan

The Behavior Assessment Guide provides the user with a comprehensive set of data gathering and records abstraction forms to facilitate the assessment and functional analysis of a person's challenging behavior and the generation of nonaversive behavioral support plans. Permission has been granted by the authors to reproduce the forms for professional use. -spiral, $21.00

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G.W. LaVigna, T.J. Willis, & A.M. Donnellan

This chapter describes the role of positive programming in supporting people with severe and challenging behavior. After discussing the need for positive programming within a framework based on outcome needs, variations of this strategy are delineated. Then, assessment and analysis are described as critical for comprehensive, positive, and effective support. A case study of severe aggression is presented to illustrate the process of assessment and analysis, the supports that follow from this process, and the long term results of this approach. - spiral, $5.00

The Periodic Service Review: A Total Quality Assurance System for Human Services & Education

G.W. LaVigna, T.J. Willis, J.F. Shaull, M. Abedi, & M. Sweitzer

Evolving from more than a decade of work at IABA, this book provides the tools needed to enhance and maintain high quality service delivery. Translating the principles of organizational behavior management and total quality management into concrete policies and procedures, the *Periodic Service Review (PSR)* acts as both an instrument and a system. As an instrument, the *PSR* provides easy to follow score sheets to assess staff performance and the quality of services provided. As a system, it guides managers step-by-step through 4 interrelated elements — performance standards, performance monitoring, performance feedback, and systematic training — to offer an ongoing process for ensuring staff consistency and a high level of quality for services and programs. Practical examples show how the PSR is applied to group home, supported living, classroom, and supported employment settings, and the helpful appendices provide numerous tables and charts that can easily be tailored to a variety of programs. - $37.95/ISBN 1-55766-142-1

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