



A quarterly publication dedicated to the advancement of positive practices in the field of challenging behavior
 Volume I • Number 3 ISSN 1083-6187 • April 1996

Behavioral Assessment: An Overview Part 2

*Thomas J. Willis and Gary W. LaVigna
 Institute for Applied Behavior Analysis, Los Angeles, California*

Editors' Note: Part 1 of this article, "Behavioral Assessment: An Overview", was published in the previous issue (Vol. 1, No. 2, January, 1996) of Positive Practices.

In Part 1, we introduced the concept that a Comprehensive Behavioral Assessment is more than simply identifying a target behavior, its antecedents and consequences. It is more than just a Functional Analysis. We said "the purpose of a behavioral assessment is to understand the person and by so doing answer questions such as: Why is the person engaging in the behavior? How does the person use the behavior to solve everyday problems?" We also made the point that in order to *understand the person*, the behavioral assessment involves gathering information in a wide variety of domains. Table 1 summarizes the major areas of focus in a Comprehensive Behavioral Assessment (Willis et al., 1993).

In Part 1, we addressed Sections A-F as shown in Table 1, concluding with Ecological Analysis. Here in Part 2, we discuss the Functional Analysis of Behavior, the hallmark of what we do as behavior analysts. This is an extremely important part of a Comprehensive Behavioral Assessment. Unfortunately, some people have the view that the Functional Analysis and Behavioral Assessment are synonymous. They are not!!! The Functional Analysis should be part of the larger and more comprehensive

Behavioral Assessment. With that understanding, let's discuss what is involved in a Functional Analysis of Behavior.

G. Functional Analysis of Behavior. The purpose of a Functional Analysis is to identify events that control behavior; in other words, events that cause behavior to increase and/or decrease. These events may occur before the behavior (i.e., Antecedents) or after the behavior (i.e., Consequences).

Continued on page 11

- A. Referral Information
- B. Description Of The Person
 - Physical Characteristics
 - Cognitive Abilities
 - Communication Abilities
 - Motor/Perceptual Abilities
 - Self-Care Skills
 - Social Skills
 - Community Skills
 - Domestic Skills
 - Leisure/Recreation Skills
- C. Other Background Information
 - Family History and Background
 - Living Arrangement
 - Program Placement
 - Health and Medical Issues
 - Service History
- D. Mediator Analysis
- E. Motivational Analysis
- F. Ecological Analysis
- G. Functional Analysis of Behavior
 - Description of Problems
 - History of Problems
 - Antecedent Analysis
 - Consequence Analysis
 - Impressions and Analysis of Meaning

Table 1 - Major Areas of Focus in a Comprehensive Behavioral Assessment

Contents

Behavioral Assessment: An Overview Part 2	1
Editors' Note	2
The Development of a Statewide Behavior Resource in the State of Montana	3
Definition of a Problem Behavior	20
Procedural Protocols - Transition	21
IABA Resources	24

Positive Practices

Publisher

Institute for Applied Behavior Analysis
A Psychological Corporation

Co-Editors

Gary W. LaVigna and Thomas J. Willis

Managing Editor

John Q. Marshall, Jr.

Institute for Applied Behavior Analysis

Gary W. LaVigna, PhD, Clinical Director
Thomas J. Willis, PhD, Assoc. Director

Service to Employ People

Julia F. Shaul, LCSW, MSW
Director of Supported Employment
Stacy L. Daniels, MA
Asst. Director Supported Employment
Susan Caraway
Manager - Los Angeles
Ayndrea LaVigna
Manager - Ventura County
Kerry Costello, MA
Manager - West Los Angeles
Leilah Sadd
Manager - North Los Angeles
Patricia Speelman, MA
Manager - Orange County

Social/Community Integration and Participation

Maryam Abedi, PhD
Director of Supported Living
Heike I. Ballmaier, PsyD
Manager - North Los Angeles
Ellen J. Lewis, PhD
Manager - Ventura County
Lori Leak
Supervisor - Ventura County
Cheryl Stroll-Reisler, MA
Manager - Los Angeles
Peggy Dreisbach
Supervisor - Orange County

Competency Based Training Program

Diane Sabiston, MEd
Program Consultant - Georgia

Professional Training Series

John Q. Marshall, Jr., MEd
Seminar Coordinator - South Carolina

Printed Resources

Brenda LaVigna
Supervisor - Book Sales

Administration

Jonathan C. Mohn
Director Finance and Accounting
Robert H. Shelton
Director of Human Resources
and Administrative Services

Copyright 1996 by:

Institute for Applied Behavior Analysis
5777 West Century Blvd. #675
Los Angeles, CA 90045 USA
(310) 649-0499

All rights reserved. No portion of this newsletter may be reproduced by any means without the express written permission of the Institute for Applied Behavior Analysis.

Positive Practices (ISSN 1083-6187) is a quarterly publication of the Institute for Applied Behavior Analysis. Individual issues are \$10.00 each. Subscriptions are \$25.00 per year for delivery within the US and \$40.00 per year for delivery outside of the US. For subscription information, change of address or information on classified advertisements contact: John Marshall; IABA; PO Box 5743; Greenville, SC 29606-5743 USA; (864) 271-4161.

Individuals wishing to contribute articles or letters to the publication are requested to contact Gary LaVigna or Thomas Willis; IABA; 5777 West Century Blvd. #675; Los Angeles, CA 90045 USA; (310) 649-0499.

Editors' Note...

This issue concludes our two-part article introducing the topic of behavioral assessment and functional analysis. We would very much like to hear from you regarding any questions or comments you would care to pose regarding this. In fact, while the general comments we have heard with reference to the newsletter are all positive and encouraging, we have not yet been successful in generating from you questions and comments that we could publish in our effort to make *Positive Practices* interactive and a vehicle for communication and discourse in the field. So folks...send in those cards and letters.

What we do have in this issue, is a very nice article from Perry Jones, David Bristow and Jean Morgan, in Montana, describing a training project we had an opportunity to provide in their state. We think you will find it of interest and hope that it shows what a spread of effect certain forms of training can have. This is particularly important given shrinking budgets and training efforts that are often disappointing in the systems change they fail to produce.

In this issue we also present another definition of a challenging behavior for your growing library and a set of protocols designed to help a person transition from an out of home placement, back to her family home. We think that transition planning is often over looked as an opportunity to get a support plan off to a good start. Further, because it typically occurs without planning, transitions can sometimes add to the problem. We hope our sample protocols will give you some ideas on how you can approach this often overlooked opportunity.

Let us hear from you and tell us what you think.

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



*Gary W. LaVigna, PhD
Clinical Director*



*Thomas J. Willis, PhD
Associate Director*

The Development of a Statewide Behavior Consultant Resource in the State of Montana

Perry Jones, Training and Development Specialist, Developmental Disabilities Program, Department of Public Health and Human Services, Helena, Montana

David Bristow, Field Services Specialist, Developmental Disabilities Program, Department of Public Health and Human Services, Helena, Montana

Jean Morgan, Training Services Coordinator, West Mont Habilitation Services, Helena, Montana

Editors' Note: One of the most satisfying things we get a chance to do is to impact on whole systems. Such an occasion occurred in 1994 when we provided a two-week training institute in and for the State of Montana. We structured it just like our annual Summer Institute, the major difference being that the referral clients were from their own system. The result was that they not only had 30 consultants available to them who were trained in the IABA method, the practicum method of training also produced for them comprehensive assessments and associated support plans for 30 people who had the most significant challenges.

Another difference, of course, was that the training took place in Montana during the Winter rather than in California during the Summer, but that's another story. The following is their report of this training experience. We think you'll find it interesting.

Introduction

The state of Montana is nationally recognized for the quantity and quality of services offered to persons with developmental disabilities. In an effort to further improve these services, the Developmental Disabilities Program of the Department of Public Health and Human Services (DDP/DPHHS) recognized a need to increase the skills of staff in technical positions responsible for addressing severe and challenging behaviors manifested by persons with developmental disabilities in institutional and community based settings. The development of a statewide behavioral consultant resource was needed. The Institute for Applied Behavior Analysis (IABA) was selected to provide the training. The decision to select IABA to provide training was based in part on the positive testimony of Montana staff who had previously attended IABA's annual two week Summer Institute in Los Angeles.

A grant proposal was developed by the Developmental Disabilities Program (DDP) and submitted to the Montana Developmental Disabilities Planning and Advisory Council (DDPAC) to bring Drs. Gary LaVigna, Tom Willis and IABA support staff to Helena, Montana to conduct a staff training session analogous to the IABA two week Summer Institute. Thirty staff in training positions from the community based nonprofit corporations, DDP staff and staff from the three state institutions serving persons with developmental disabilities attended this training in December of 1994.

As part of their training activities, each trainee completed an IABA style assessment and support plan for an assigned focused person. In all, a mix of 30 children and adults with serious behavior challenges from a variety of settings (group homes, supported living, natural homes and one state institution) had plans developed. Many of the support plan recommendations were implemented by the planning teams for these individuals with generally positive results. Assigned DDP staff developed a statewide protocol for care givers of persons with developmental disabilities in all settings to enable them to access an IABA trained behavioral consultant at little or no cost when needed.

This report summarizes the events that took place in the creation of this statewide behavioral consultant resource, and summarizes the positive outcomes achieved for a sample of the consumers for whom support plans were developed during the 1994 Helena Winter Institute.

Statement of Need for the Project

Montana is a large, primarily rural state. Services to persons with developmental disabilities are delivered in a variety of settings and spread across a large geographic area. Since the early 1970's, the delivery of services to persons with developmental disabilities shifted from primarily institutional settings to community based services. Currently, a total of 46 nonprofit corporations contract with the DDP to provide a wide array of ser-

vices to more than 2,000 adults and children in community based settings. Most of the children live in natural and foster homes. The majority of adults live in group homes and supported living arrangements. Approximately 162 adults

ing in physical and nonphysical de-escalation techniques, and/or enrollment in a behavior modification curriculum developed in 1979 by the DDP. The Mandt system develops the skills of staff in de-escalating consumers who “act out.” The

Mandt system is a crisis response strategy, using a graded system of physical and non-physical interaction techniques to reduce the likelihood of injury. At the time the ATR/DSP was written, Mandt training was a somewhat limited resource, with 15 statewide instructors available to provide statewide training in

the field of developmental disabilities.

The behavior modification curriculum, entitled the Developmental Disabilities Client Programming Technician or DDCPT, provided an introduction to topics such as normalization, reinforcement, prompting/fading, task analysis, chaining, skill maintenance, data collection, Montana rules and policies, etc. The DDCPT had not been significantly modified since 1985, and the DDP recognized a need to update this “home grown” curriculum to include more information on topics such as ecological assessment (LaVigna & Donnellan, 1986), using scatter plots (Touchette, MacDonald, & Langer, 1985), and an increased focus on nonaversive behavioral strategies. The DDCPT curriculum was the primary training tool to develop the skills of staff assigned to write behavioral support plans for individuals with significant challenging behavior.

Limitations with the DDCPT and Mandt training in addressing the needs of individuals manifesting severe behavior challenges were recognized by many people, especially those who provided services to consumers with extremely challenging behavior. These individuals and a growing number of others believed the Montana service delivery system needed to do more to promote the use of nonaversive behavioral strategies. The use of aversive techniques such as physical and mechani-

cal restraint, exclusion and seclusion time out, contingent exercise, restitutional overcorrection and positive practice was (and remains as of this writing) allowed in community based services, subject to the conditions outlined in the Administrative Rules of Montana. Although the use of these procedures to punish or to protect was legal, a growing number of persons felt that:

The use of current technology too often failed to reduce the frequency and severity of severely aggressive and disruptive behaviors. In worst case scenarios, individuals’ lost their community placements and were committed to a state institution without the benefit of a sophisticated assessment and support methodology. More frequently, individuals exhibiting severely aggressive behaviors experienced a lessened quality of life, with severe restrictions placed upon their living and work environments. Other consumers who lived and worked with consumers who displayed severe aggressive and disruptive behaviors experienced a diminished environmental quality of life, as well.

Direct services staff were expected to tolerate aggressive behavior of consumers which they may have felt powerless to change in any significant way. Under these circumstances, the working environment may have become highly stressful because significant behavior challenges “come with the territory.” One result of this is that the potential for consumer abuse may increase.

Reactive strategies may have been intended to help protect consumers and staff from injury and serve to empower staff to “do something,” but all too often these efforts failed to produce durable change, and served to create a “non-therapeutic treatment milieu.”

Four DDP funded service provider staff and one DDP staff person had attended the IABA Los Angeles Summer Institute.

Limitations with the DDCPT and Mandt training in addressing the needs of individuals manifesting severe behavior challenges were recognized by many people...

continue to reside in three state institutions. These institutions include the Montana State Hospital (MSH) in Warm Springs, The Montana Developmental Center (MDC) in Boulder and Eastmont Human Services Center (EHSC) in Glendive.

In 1989, the Montana Association for Independent Disabilities Services (MAIDS) received a DDPAC grant to develop training resources for staff serving persons with developmental disabilities. MAIDS is comprised of executive directors for nonprofit corporations funded by the DDP. The MAIDS grant was developed to create accessible staff training opportunities, based on feedback from a statewide provider survey. Grant outcomes included the acquisition of a variety of training curricula and the publication of the Accessible Training Resources for Disabilities Services Personnel (ATR/DSP) document by Dan Fox and Bruce Buchman in December of 1991. The highest training priority identified in the ATR/DSP was the need for direct service staff to have access to training in the Mandt System (1978) or other strategies for addressing the needs of people with aggressive behaviors.

The primary methods used to increase the skills of staff in DDP funded community based settings serving people with aggression in late 1991 included the provision of one or two days of Mandt train-

Support for the IABA assessment and support methodologies spread by word of mouth. These individuals challenged themselves to develop nonaversive methods to serve some of the most behaviorally intensive individuals in the state of Montana, and espoused the need for a better approach in developing support plans for consumers with severe behavior challenges on a statewide basis.

The catalyst for the IABA Helena Winter Institute grant proposal to DDPAC occurred during a conversation between John Marshall, IABA Training Coordinator, and this paper's first author in January of 1994. John explained that it would be possible to bring IABA staff to Montana for the purpose of training up to 30 staff involved in the provision of services to persons with developmental disabilities using the Los Angeles Summer Institute model.

The key advantages for bringing this training to Montana included the reduction of travel costs since travel, meals and hotel expenses would cost less for instate training. The other primary benefit included the fact that trainees are required to complete an assessment and support plan for a focus person during the two week training period. In this case, plans would be developed for Montana citizens with severe behavior challenges. Four nonprofit corporations and a state institution are located within a 30 mile radius of Helena. Selecting 30 individuals with significant challenges, who could benefit from the development of support plans, would be a matter of deciding which individuals would be considered as the highest priorities and the most likely to benefit.

Recipe for the Creation of a Statewide Behavior Consultant Resource

In January of 1994, a decision was made by DDP administrative staff to support the submission of a grant proposal to DDPAC for funding a replication of the two week IABA Summer Institute in Montana.

Letters requesting support for the grant were sent to all the nonprofit corpora-

tions, the three institutions serving persons with developmental disabilities, DDP regional and management staff, regional councils and others. The written documentation collected in support for the project was overwhelming. The DDP asked DDPAC for funding to cover the cost of travel, meeting space rental, secretarial support, office equipment rental, paper, and other training related expenses.

The project was not funded in the March, 1994 DDPAC funding session. In August of 1994, the DDP submitted a revised proposal. This time, the DDP administrator (Mike Hanshew) asked only for money to cover the IABA fee for the two week institute. The DDP would pay for all the trainee travel (except for institutional staff) and all other training related expenses not covered in the IABA contract proposal. The offer of a hard match of approximately twenty percent of the total project cost resulted in the DDPAC funding of this grant proposal in August of 1994.

IABA staff mailed referral forms to the DDP for those consumers selected for the development of support plans as part of the IABA "Winter Institute" scheduled for December 5, 1994 through December 16, 1994. Local nonprofit corporations and MDC were asked by the DDP to submit a prioritized list of consumers for whom support plans should be developed. IABA referral forms were completed for 45 individuals. These referrals were mailed to IABA; IABA staff would select thirty individuals from this pool. In the event of consumer illness or other problem, another individual could be assigned from the pool of consumer referrals with little disruption during the on-site training. Ultimately, IABA staff selected the consumers during the second day of training, and matched these consumers with the individual trainees.

Selection of the trainees to attend the two week training session "with all expenses paid" had potential for controversy. Four training slots were awarded by the DDP to the agency (Department of Corrections and Human Services) governing the three state institutions serving

persons with developmental disabilities. Trainees were assigned by administrative staff from the institutions. Ten slots were awarded to DDP; these training slots were awarded to the ten staff who requested the training. Twenty two non profit corporation staff submitted a letter of request to attend the training for the remaining sixteen slots. DDP decided the best way to assign these slots would be for the MAIDS group to select the trainees from the non profit corporations. This decision turned out to be a good choice; unsuccessful corporation applicants had the benefit of a "peer review" in the decision making process. The letters of application for all 30 trainees were forwarded to IABA, to enable IABA personnel to familiarize themselves with the trainees before going on-site.

In exchange for having the travel and training costs picked up by DDPAC and the DDP, these sixteen provider corporation staff agreed to provide volunteer assistance to care givers outside of their agencies for up to five working days per year. These sixteen staff would provide assistance along with the ten state DDP staff who are responsible for providing technical assistance and training as needed to care givers of DDP eligible individuals in all settings on a statewide basis. Consumers living in institutions would be served by their internal consultants. The

...plans would be developed for Montana citizens with severe behavior challenges.

basis of a new statewide consultant resource was formed.

The training session began on December 5, 1994 and ended on December 16, 1994. The final draft versions of the trainees' support plans were submitted to IABA staff prior to the conclusion of training. IABA staff generated an attractive and professional version for submission to the planning teams for the consumers. IABA staff also generated a

“sanitized” version of a support plan for every final plan (a report absent of all identifying information). This enabled support methodologies to be shared and explained to others without violating consumer confidentiality. Copies of the support plans and their sanitized counterparts were sent to the DDP a few weeks after the training session. The DDP copied all the materials, then forwarded copies of their support plans (including the sanitized versions) to the trainees. The trainees attached cover letters to the final support plans and mailed them to the directors of the programs serving the consumers with instructions for directors to share the document with the planning teams for each consumer. The trainees were now referred to as IABA trained consultants.

DDP generated a description of the services offered by the consultants and a protocol for accessing the services of a consultant and mailed it to care givers of persons with developmental disabilities. Specifically, this document was sent to all nursing home directors serving one or more persons eligible for the 1987 Omnibus Budget Reconciliation Act (OBRA) funding, directors of all special education districts and directors of special education cooperatives. Executive directors of the nonprofits, case managers of consumers, child and family service provider outreach staff (Family Support Specialists) and the DDP staff in regional and satellite offices also received this document.

By April of 1995, all the support plans had been received by the directors of the corporations serving consumers selected to have support plans developed during the Helena Winter Institute. In addition, an initial protocol and description of the consultant resource had been mailed statewide to care givers serving adults deemed eligible for DDP funded services, and to child and family service providers serving children at risk of having or having developmental disabilities.

Evaluation of DDPAC Grant Objectives

DDPAC awarded funding to Developmental Disabilities Program to cover the cost of bringing Drs. Gary LaVigna and

Tom Willis and IABA support staff to Helena for the two week Helena Winter Institute. This money also paid for all the IABA materials (textbooks, notebooks, printed materials, etc.) needed by the thirty trainees. The DDP provided funding to cover the travel and other training costs (coffee, room rental, paper, printer rental, etc.) for all trainees except the four from institutions.

The DDPAC grant was funded on the premise that DDP (as the contractor) would use the funds to construct an “IABA trained consultant resource” to serve Montana children and adults with challenging behavior who have been determined eligible for DDS funded services.

The grant language was very specific as to the expected outcomes of DDPAC funding:

1. To develop thirty “state of the art” support plans for individuals with challenging behaviors from MDC and the Helena area. These individuals would be prioritized for this service by their respective agencies, based on input from their individual planning teams.
2. To train participants to become competent in designing behavior support plans to address the needs of persons with developmental disabilities who exhibit severe and challenging behaviors. These staff would become a statewide resource for service delivery agencies encompassing the spectrum of services for this population.

Winter Institute Support Plan Outcomes

Twenty eight support plans were developed, and many of the recommendations in the plans developed for Helena area and Montana Developmental Center consumers were implemented by their respective planning teams. Two IABA trainees were unable to complete their support plans.

The results of the implementation of recommendations from the twenty plans developed for Helena area consumers were summarized by IABA trained consultants David Bristow and Jean Morgan in a report written for the 1995 Montana Conference on Developmental Disabili-

ties presentation. (This report did not address the support plans developed for those individuals residing at the MDC at the time of training.) A summary of this report follows:

Table 1 summarizes the frequency of specific categories of recommendations that were eventually adopted as support strategies by the consumer's support teams. The resulting recommendations, as represented in Figure 1 and Figure 2, illustrate an important emphasis on proactive, nonaversive approaches to programming.

Type of Procedure	Frequency
Positive Programming:	
Coping Strategies	15
Relaxation	14
Augmented Picture Communication	13
Social Skill Training	7
Allow choices	5
Ecological Manipulations:	
Activity Sequencing	14
Move	11
Active listening	9
Counseling	6
Community Interest Survey	5
Focused Support Strategies:	
Physician/Medication/Psychiatric review	7
Differential Reinforcement of the Omission of a Behavior with a Progressive schedule of Reinforcement	7
Differential Reinforcement of the Omission of a Behavior	7
Discrete Trial Compliance	5
Token Exchange	4
Differential Reinforcement of an Alternate Behavior	3
Reactive Strategies:	
Stimulus Change	10
Redirection	6
Geographical Containment	5
Antecedent Control	4

Table 1 - Numbers of Support Plans Incorporating IABA Recommended Procedures (Based on a Total of 20 Plans)

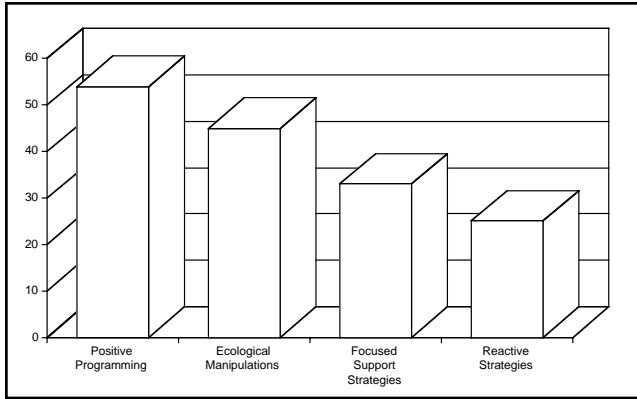


Figure 1 - Frequency of Recommendations (Based on a total of 20 plans)

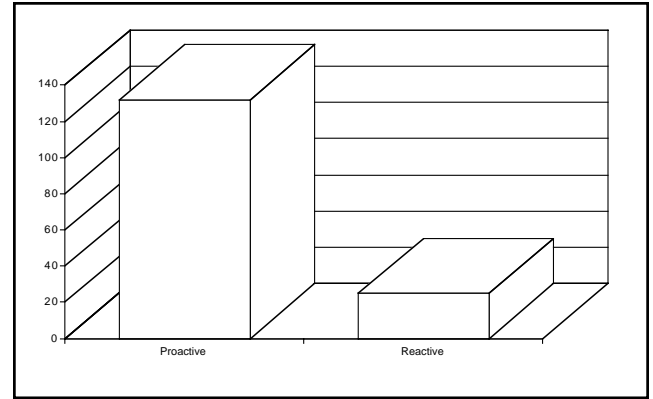


Figure 2 - Proactive vs. Reactive Strategies

No aversive recommendations (as defined in the *Administrative Rules of Montana* [Lovelace, 1993]) were made in these support plans. As a comparison, prior to the 2 week Helena Winter Institute, 7 of the 20 consumers had formalized support plans containing aversive components that had been authorized by Montana's Program Review Committee and were being implemented. Of these 7 plans, 4 authorized the application of bodily physical restraint for potentially dangerous behavior if necessary. Four authorized the use of exclusionary timeout and 1 authorized the use of mechanical restraints (motorcycle helmet, wrist and arm restraints). Each of these 7 plans also contained differential reinforcement procedures, each of a single reinforcement strategy, these being Differential Reinforcement for Omission of Behavior (DRO) (4); Differential Reinforcement of Incompatible Behavior (DRI) (2); or Differential Reinforcement of Alternative Behavior (DRA) (1). Four of the 13 other plans had single schedule reinforcement strategies, either DRO, DRI, or DRA, in place as the primary treatment approach. One of these procedures had been in place for approximately 10 years. The other 6 had been in place for varying periods ranging from several months to 6 years. Nine of the 20 consumers had no formal support plans in place.

Again, across the 20 plans reviewed, numerous recommendations were adopted as initially conceived and several were later modified by the consumer's support team to match the consumer's circumstances at the time. Of the 20

consumers who had IABA style support plans adopted, all but one experienced positive behavioral results which can be defined as a reduction in the frequency and/or intensity of behaviors targeted for reduction or an increase in the frequency of adaptive behaviors. These results have been determined by both objective data and subjective anecdotal reports collected from direct service staff across the 10 month period following the 2 week Helena Winter Institute.

Support plans are designed to improve the quality of life for individuals referred for the consultant service, as well as to decrease rates of maladaptive behaviors. Measuring the effect of support plan recommendations by reviewing the baseline and treatment rates of maladaptive behaviors is often an incomplete measure of success. Increased rates of positive reinforcement, the structuring of additional activities, staff training in stress management and positive environmental changes may not always be reflected in lowered rates of maladaptive behaviors, but may serve to significantly improve the quality of life for the individual served.

The impact of the 132 proactive support plan recommendations, summarized in Table 1 and represented in proportion to the recommended Reactive Strategies in Figure 2, is difficult to qualify except in terms of the improved quality of life that does develop with a deeper, broader and richer array of treatment choices available for consumers and their support teams. The most significant impact of implemented Helena area support plans lies in these proactive recommendations

resulting from a thorough antecedent analysis and functional analysis. A detailed comparison between the 132 proactive strategies and the 11 single dimension differential reinforcement strategies in place prior to the development of the 20 support plans is beyond the scope of this report but the *qualitative* impact may best be measured by anecdotal information about individual successes which is summarized below:

1. Of the 20 plans developed during the Winter Institute, several assisted consumers in adopting new life-styles. For example, 6 consumers, by merely moving to environments which allowed more individual choices (categorized as Ecological Manipulations in Table 1), realized sudden and durable reductions in problem behavior. Two individuals moved to their own apartments in the Helena community. One moved to a supported living foster home and three moved to less restrictive group home environments.
2. Support plans which recommended in-depth consultation by a physician or psychiatrist assisted in the reduction of problem behaviors in all 7 who were recommended for this Focused Support Strategy. Two in-depth medical consultations identified significant behavioral influences of environmental airborne and dietary allergens. In one particular case, the gluten allergy of Coeliac Disease was diagnosed and treated by dietary restrictions with significant corresponding reductions in

problem behaviors. This particular consumer had previously had aversive procedures approved for various forms of physical restraint and exclusion time-out. Episodes requiring physical restraint for this individual have been eliminated following a 10 month period of dietary change.

3. Augmentative Picture Communication Systems positively impacted 5 consumers by reducing the rates of problem behaviors. In the case of one 26 year old individual, who has displayed severe self injurious behavior since childhood, a significant and durable reduction in these behaviors occurred. A follow-up study of this case and other successful cases will be submitted for future publication.

Evaluation of the Development of the Statewide IABA Trained Consultant Resource

Introduction

Summarizing DDP progress in implementing a statewide consultant resource was the primary purpose of two questionnaires mailed statewide in November of 1995. Questionnaires were mailed to the directors of special education cooperatives and special education directors in the schools, DD case managers, family support specialists, field service specialists, training coordinators in the DDP funded nonprofit corporations, the IABA trained consultants, and nursing home administrators serving one or more OBRA (DD) eligible individuals. In all, just over 330 questionnaires were mailed out. Two questionnaires were developed:

- I. Consultant Questionnaires were designed to assess the extent to which consultants have used their skills to address consumer behavior challenges, and related consultant issues. These results are summarized in Table 2.
- II. Service Delivery Personnel Questionnaires were developed to assess

#	Question	Response		
		yes	no	unsure
1.	I provided assistance to my agency staff using some aspect of my IABA training.	14	0	
	—Attendance and problem solving at a formal or informal meeting	13		
	—Telephone consultation	10		
	—Provided ideas for a formal written plan of intervention	13		
	—Trained one or more staff in some aspect of the treatment of client behavior problem	11		
	—Assisted in the completion of a full or partial IABA style assessment	10		
	—Completed a "full blown" IABA style support plan	6		
	—Loaned the <i>IABA Forms and Procedures Manual</i> (Willis & LaVigna, 1994) to one or more staff to give them some ideas for supporting a consumer with a behavior challenge	7		
2.	Staff in my agency are aware of the skills that I have to offer.	11	1	2
3.	I have invested the following number of hours using my skills as an IABA trained consultant during the past year:			
	11-50 hours (6)			
	51-250 hours (6)			
	251-1,000 (2)			
4.	I was able to respond to every request for IABA assistance I received.	4	9	
5.	I went outside my agency to provide the consultant service.	8	6	
6.	I made a significant contribution in the quality of life for the consumers I have served.	10	3	
7.	I would like to be a part of a work group to develop a state-wide crisis response strategy.	11	2	
8.	—Not many people outside our agency understand the resource.	5		
	—Training is needed to ensure that people understand the resource.	9		
	—I am willing to provide training to others regarding the availability of the resource.	9		
	—I don't want more people asking me to provide the consultant resource.	3		
	—I would like to be a part of decisions made regarding the statewide use of the resource.	9		
9.	A "Consultant Resource Handbook" is needed	11	2	
10.	A resource handbook should include:			
	—A description of the resource	11		
	—Instructions for accessing the resource	11		
	—Copy of the IABA Referral Form	9		
	—Resource Prioritization Checklist	10		
	—Other information	3		
11.	I have the skills and resources to do the job	9	3	1

Table 2 - Summary of the IABA Trained Consultant Feedback Questionnaires

caregiver utilization of the resource. Are folks aware of the consultant resource and are they requesting and using the resource? Is the service helpful? Are there problems? What are the other issues? These results are summarized in Tables 3, 4 and 5.

Survey Results by Category of Respondents

A database was generated for every category of survey respondents. Overall, more than a 40% of all the questionnaires were returned by the December 15, 1995 survey deadline. This is a very good rate of response for a mass survey mailing.

IABA Trained Consultant Responses

Table 2 summarizes the results of the of the Consultant Questionnaire. A total of 30 questionnaires were sent out and 14 were returned.

In summary, consultants used their newly acquired skills in a variety of ways. All of the consultants who returned surveys have used their skills during the past year to address consumer behavior challenges either within their own agency, or outside of their agency as outlined in the responses to Question #1 of Table 2. Of the 14 responders, a majority used their IABA skills in the following ways: 13 indicated they had used their skills at planning meetings (93%), 10 in telephone consultations (71%), 13 in helping to develop a formal training program (93%), 11 providing IABA staff training (79%), and 10 in completing, or assisted in completing a full or partial IABA assessment (71%). Six (43%) of the consultants completed a behavioral support plan, and 7 (50%) loaned their *IABA Forms and Procedures Manual* (Willis & LaVigna, 1994) to give one or more colleagues some support plan ideas.

Use of the Consultant Resource by Caregivers

In order to assess the success of the project in developing a state IABA trained consultant resource, survey forms were sent to all the persons and/or agencies involved in the provision of care and support to persons with developmental disabilities. Respondent surveys were broken out in seven categories to assist

planners in making decisions regarding the future use of the resource. These categories are shown in Table 3. Table 4 summarizes the survey results for the 7 categories of respondents.

The interpretation of the survey results proved difficult. It became apparent that some respondents checked boxes which indicated either a lack of clarity in the wording of the survey, a hasty response on the part of the responder, or a combination of these factors. In cases when a review of the survey indicated the respondent was unaware of the IABA resource, a decision was made to record this, even if it conflicted with the respondent's answer to question #1 on

the survey form. This did not occur often.

In some cases, respondents left boxes blank. Comparing the sum of the answers to individual questions with the total number of respondents by category will support this. Survey results should be viewed as indicators. These survey results have value in identifying areas where additional efforts are needed on the part of DPHHS to further develop the IABA resource.

As reported elsewhere (Jones, 1995), 53 of 64 (83%) respondents claimed they were able to or usually able to access the services of a consultant in a timely manner. Forty five of 54 (83%) respondents stated the services of an IABA trained

Category of Respondent	Abbreviation
1. Child and family service provider	Family Sup
2. Developmental Disabilities Program Field Service Specialists	Field Serv
3. Special Education School Districts and directors of Special Education Cooperatives	School Adm
4. Nursing Home Directors	Nursing Adm
5. Targeted and Contracted DD Case Managers	Case Man
6. DDP Funded Corporation Staff Training Coordinators	Training Cor
7. Other (Respondents Not in the Above Categories)	Other

Table 3 - Service Delivery Personnel Questionnaires: Categories of Survey Respondents

Respondent Categories	TSR	% Resp	# Aware	# Req	% Aware	% Req
Family Sup	51	41%	38	24	75%	47%
School Adm	25	39%	5	2	18%	7%
Nursing Adm	28	44%	3	0	11%	0%
Training Cor	19	58%	17	15	89%	79%
Field Serv	4	67%	4	4	100%	100%
Case Man	24	48%	23	16	96%	67%
Other	10	N/A	4	2	40%	20%
Totals (excl. "other" cat.)	151	46%	94	63	60%	40%

Key to the column headings	
TSR-	Number of survey forms returned by Dec. 15, 1995.
% Resp-	Percentage of survey forms returned.
# Aware-	Number of respondents who knew of the consultant resource.
# Req-	Number of respondents who requested (or who had their staff request) the services of an IABA trained consultant.
% Aware-	Percentage of respondents aware of the resource.
% Req-	Percentage of respondents who requested (or who had their staff request) the services of an IABA trained consultant.

Table 4 - Service Delivery Personnel Questionnaire Results

consultant were useful in dealing with one or more consumer behavior challenges over the past year.

Another measure of success of this project is establishing types and frequency of assistance the IABA trained consultants provided during the first year as summarized in Table 5. This table indicates the consultants have successfully provided a wide variety of assistance in serving the needs of individuals with disabilities and their caregiver. These forms of assistance were generally unavailable prior to the 1994 Winter Institute.

In Summary

The consultant resource was made possible by a grant from DDPAC. This resource was widely acknowledged and used by service providers contracting with the Developmental Disabilities Program during the past year. Training with school district personnel and nursing home ad-

Freq	Category of Assistance Delivered by the Consultant
39	Attendance and problem solving at a formal or informal meeting with provider.
26	Telephone consultation.
37	Help with ideas for a formal plan of intervention.
17	Trained staff to deal with some aspect of a consumer behavior problem.
16	Assisted service provider staff in the completion of an IABA style assessment.
25	Completed an IABA assessment.
17	Completed an IABA support plan.
17	Provided follow up with initial assistance.

Table 5 - Frequency and Type of Assistance Provided by Consultants from December 1994 - November 1995 (Based on 156 Service Delivery Personnel Questionnaires)

ministrators is needed to ensure these service providers are aware of the consultant resource. The resource is limited in all settings; consultants are currently employed as full time staff who have volunteered to take on the added responsibility of assisting care givers who serve consumers with behavior challenges.

A handbook clearly describing the IABA trained consultant service is being developed. The handbook will cover the following:

1. A description of the IABA trained consultant resource in layman's terms.
2. Who is eligible to be served by DDPAC funded IABA trained consultants.
3. The protocol for accessing a consultant.
4. A prioritization scheme for ensuring that persons with developmental disabilities in high need have access to the service.
5. A referral form which will include the information deemed necessary by IABA trained consultants in responding to requests for assistance.

The handbook is being developed by a graduate of the IABA Winter Institute (Miskuly, in preparation) and is scheduled for completion by September 1996.

Many issues remain regarding the consultant resource. The following issues are a sample of some of the factors to consider in the further development of the resource.

- Review the integration of the consultant resource with the DDP "Exit From Services Policy."
- Develop a funding mechanism to enable consultants "with the time" to travel to other regions.
- Review the integration of the IABA trained consultant resource with crisis response strategies.
- Developing ways to facilitate the use of the resource by being able to bill nursing homes and school districts for the costs associated with travel to these settings.
- Development of a long range funding mechanism designed to maintain or strengthen the future availability of this resource to offset the loss of consultants through attrition.

In Conclusion

Many consultants in a variety of settings have devoted a lot of time and effort using their new skills to better serve consumers with behavior challenges. A handbook devoted to making the resource more widely understood and accessible is currently being developed. DDPAC funding of the IABA Consultant Training Grant has resulted in the creation of a new and sophisticated statewide resource to help address the needs of persons with developmental disabilities and severe behavior challenges.

References

Bristow, D. & Morgan, J. (October, 1995) *The impact of IABA plans in Helena*. Paper presented at the Annual Montana Conference on Developmental Disabilities, Bozeman, MT.

Fox, D. & Buchman, B. (1991). *Accessible training resources for disabilities services personnel*. Montana Association for Independent Disability Services, PO Box 80185, Billings, MT 59108.

Jones, P. (1995). *Final grant report: Staff training from the Institute for Applied Behavior Analysis in the Assessment and Analysis of Severe and Challenging Behavior*. Department of Public Health and Human Services, Developmental Disabilities Program, PO Box 4210, Helena, MT 59604.

LaVigna, G. W., & Donnellan, A. M. (1986). *Alternatives to punishment: Solving behavior problems with non-aversive strategies*. New York, NY: Irvington Publishers.

Lovelace, L. (1993). *Aversive procedures, Administrative Rules of Montana*, Section 46.8.1206-46.8.1208.

Mandt, D. (1978). *The Mandt system*. David Mandt and Associates, PO Box 831790, Richardson, TX 75083-1790.

Miskuly, P. (in preparation). *Behavior management consultant Resource handbook*. Department of Public Health and Human Services, Developmental Disabilities Program, PO Box 4210, Helena, MT 59604.

Touchette, P. E., MacDonald, R. F., & Langer, S. N. (1985). A scatter plot for identifying stimulus control of problem behavior. *Journal of Applied Behavior Analysis*, 18, 343-351.

Willis, T. J. & LaVigna, G. W. (Eds.), (1994). *The IABA forms and procedures manual*. Los Angeles: The Institute for Applied Behavior Analysis.

In-House Training

IABA offers training on the following topics: Assessment and Analysis of Severe and Challenging Behavior, Positive Approaches to Solving Behavior Challenges, Assuring Service Quality and Staff Consistency, Supported Employment, and Emergency Management and Reactive Strategies within a Nonaversive Framework.

Contact John Marshall (telephone: [803] 731-8597; fax: [803] 731-8598; toll free: [800] 457-5575).

Behavioral Assessment continued from page 1...

The Functional Analysis also has as its purpose the clear specification of the identified challenging behavior (i.e., Operational Definition). At a minimum, a functional analysis specifically includes a Description of the Problem, a History of the Problem, an Antecedent Analysis, a Consequence Analysis, and an Analysis of Meaning.

1. **Description of Problems.** In this part of the functional analysis, the primary problems precipitating the referral should be determined. Whether they fall into the class of behavioral excesses or behavioral deficits should also be determined. These determinations would not necessarily be the formulations of the problems as provided by the referral source but rather should be the most useful formulations developed based on an analysis of the information that has been gathered. While many people may think that describing the problem should be the easiest part of the functional analysis, we have often found it to be among the most difficult. Good descriptions include descriptions of the topography, the cycle the course and the strength of the behavior.

a. **Topography.** The topography of a behavior is a description of its observable and measurable components; it is a description of the physical characteristics that signal to the observer that the behavior has occurred. In determining the physical characteristics of a behavior, we ask “When the person engages in the behavior, What does it look like? What does it sound like? What does it smell like? What does it taste like? For example, the topography of “Aggression” is fre-

quently described as including hitting, biting, kicking, scratching and/or pulling the hair of another person, attempts to do so, and/or verbal and/or gestural threats to do so. Each one of the individual actions needs to have a description of its topography. It is not sufficient to say “Aggression involves hitting and biting.” Rather, the topography of aggression might be more clearly expressed in the following way.”

“Aggression involves several distinct actions, including hitting (i.e., any contact with an open hand or closed fist to the body of another with sufficient force that the contact can be heard or the person’s body is moved or jarred as a result of the contact); biting (i.e., any contact of the person’s teeth to the skin or clothing of another). It should be clear from the above description that simply touching another person with a hand, or knuckles is not an example of aggression.

This is not to say that this is how the topography of “Aggression” *should* be defined, but rather that this is how it *might* be defined, given the information that is gathered as part of the assessment process. (Note: The tendency is to have generic definitions that apply to everyone.) For example, in any given case, it may not be appropriate to include verbal and/or gestural threats within the definition of “Aggression.” The point is that if we don’t specify what we intend to include then, for example, some people will score at-

tempts as “Aggression” and some won’t; some people will score threats as “Aggression” and some won’t;

The Functional Analysis also has as its purpose the clear specification of the identified challenging behavior

and so on. Let’s say you wish to include “verbal threats” as part of the definition of aggression. Like “hitting,” the topography of “verbal threats” needs to be specified. So we might add to our above description, “Aggression also includes verbal threats (i.e., Verbalizations the content of which indicate the intent to strike or injure another person, e.g., “I’m going to hit you.” “I’m going to kill you.”).

Here is another example, the topography for “Non-compliance” might be described as the failure to initiate a requested activity, with the requirement being that the request be reasonable, asked within an appropriate context, be understood by the person, and be within their capabilities.

b. **Cycle.** The “cycle of the behavior” breaks the behavior into countable units. Here we ask “At what point will we say the behavior has started and at what point will we say the behavior has stopped?” In other words, we specify the “onset criteria” and the “offset

criteria.” For example, the cycle for “Aggression” may be stated as follows: “An episode of Aggression is considered to have begun upon observation of any of the above topographies. An episode is considered over after five minutes have gone by without any of the topographies being observed.” The cycle here includes both the onset and offset criteria.

The cycle for “Noncompliance” may be stated as follows: “An incident of Noncompliance is considered to have occurred if the requested activity has not been initiated within five minutes of the first request.” In the case of “Noncompliance”, the cycle does not require an offset criteria. Rather, the cycle for noncompliance can be clearly defined with a well stated “onset” criterion. Again, it is important to note that the cycle definition would follow the information gathering phase. For example, the onset criterion for “Noncompliance” would vary depending on the person’s cognitive abilities, motor skills, etc.

- c. **Course.** The course of the behavior is a description of the behavior as an episode occurs over time, i.e., it is a time lapsed, “frame by frame” description of an episode. The course description includes a number of elements: 1) the precursors to the behavior, i.e., those things the person typically does prior to the *onset* of the behavior; 2) the topographies of the behavior as they unfold or may escalate as the episode continues; 3) the other things the person may do during an

episode, in addition to the topographies that have been included in the definition; 4) a description of the person’s emotional expressions during an episode of behavior; and 5) a description of the post-cursors to the behavior, i.e., a description of what the person typically does after an episode is over.

Typically, a challenging behavior has different courses, some severe and some mild. In our description of the behavior, we may want to describe a *typical* course, a *severe* course, and a *mild* course. In our antecedent analysis (see below), we would attempt to identify those reactions by others that tend to make a severe course more likely to occur and those that tend to make a mild course more likely to occur.

- d. **Strength.** There are many measures of the strength of a behavior. The most typical measure of strength is the rate of the behavior, i.e., the frequency of behavior during a specified period of time (e.g., four times per week, six times per month, fifty times an hour). A functional analysis should include a statement reporting the rate of the behavior, including its range and variability.

Duration (i.e., the length of time a behavior is performed) is another measure of the strength of behavior. In the case of behaviors that continue for a period of time (e.g., screaming, tantrums, off task) or have been defined in terms of episodes (e.g., “A tantrum starts at the appearance of the first scream and ends when screaming has been absent

for five minutes.”) it is important that the functional analysis describe the average, shortest, and longest durations.

There are other measures of strength of behavior. Rather than measuring the length of time a behavior is performed, “Latency” is a measure of the amount of time it takes a person to “start” or “begin” a behavior. Kazdin (1994) defines latency as “The amount of time that elapses between a cue and the response.” Some examples of latency are the amount of time required to start work after being directed to start; the length of time to start eating dinner after arriving at the table; the amount of time it takes a child to get into bed after the time for bed has been announced.

Other measures of strength may be determined by their obvious importance to the behavior of interest. For example, in weight control programs important measures of strength might include the person’s weight in pounds, the number of calories consumed each day, the number of fat grams consumed each day, the number of minutes of exercise each day. In energy conservation programs, important measures of strength might include daily readings of the electric meter or gas meter. In programs to help youngsters with diabetes important measures of strength might include the number of grams of sugar consumed each day, and daily blood sugar readings.

As described above, the most traditional measure of the strength of behavior is its “rate.” However, the

rate of the behavior may not be the most important measure of its strength. For example, a 5-year-old has tantrums. His mother describes them as “very serious.” She described that they occur about once a week. With only this information we might be inclined to ask “What’s the problem? My child at five had tantrums every day.” The tantrums are serious to this parent not because they occur once a week, but because when they occur they go on for 3 to 4 hours. In other words, the “seriousness” is measured by the perceived severity of the behavior. Consequently, in some cases, the severity of the behavior also needs to be described.

Severity may be described as a measure of the “impact” of the behavior; the “damage” accrued by the behavior; or the perceived seriousness of the behavior. For example, if the target behavior is someone’s “Screaming” behavior and it is occurring about once a day, while last year it was occurring 18 times a day, this is not necessarily an indication that the problem is getting better. The once a day may be from 6:00 AM continuously to 9:00 PM. In this case, in addition to *rate*, we may also want to describe the duration of the behavior. Duration is one way to describe severity.

Different measures of severity may be used, but this would depend on the target behavior and the results of

the information gathering process. For a referral problem such as “Property Destruction,” in addition to the rate of the behavior, its severity may be described in terms of the monthly costs of repair and replacement.

The history of behavior has played a very small part in behavioral assessment until recently.

In episodes of self injury and physical aggression, severity might be measured on a five point scale with “5” indicating the need for medical attention, “4” indicating the need for first aide, “3” indicating redness and bruising that lasted more than four hours after the event, and so on.

It would be nice if reliable data were available for each assessment we conduct. Unfortunately, it frequently is not. If formal data collection has not been carried out or if the cycle used to define the behavior is different than the one that has been used by others, estimates may need to be made based on whatever documentation that exists. These estimates will need to be based on careful interviewing of parents, staff and/or others who have observed the behavior. Of course, these estimates would need to be refined as reliable data collection is carried out.

As can be seen from the above, a good description of a behavior can be quite involved. The information

can be difficult to get and can require a lot of information gathering. A good description of the identified challenging behavior is necessary, however, in order to focus the other steps of the functional analysis. A good description of the identified challenging behavior is necessary to assure reliable data collection for purposes of evaluating the effectiveness of support plans, to assure consistent implementation of support plans, and to increase the likelihood that the person will learn the relevant skills. Knowing that the complexity of this part of the functional analysis is often underestimated, the first three issues of this newsletter have included sample definitions from some of our assessment reports. We will continue to include further illustrative examples in future issues.

2. **History of Problems.** The history of behavior has played a very small part in behavioral assessment until recently. Indeed, the traditional focus of behavioral assessment has been on current behavior and current maintaining variables. It has been argued by some that it is not necessary to know a person’s history in order to change behavior. While this may be true, knowing a person’s history and the history of the problem may help determine whether a behavioral approach is the best course, or what type of approach might be the first choice, or how long support might be needed.

The lack of focus on history is surprising given early descriptions of its importance. Kanfer and Saslow (1969), for example, argued the importance of history when they wrote “...knowledge of the patient’s history, of the limits of his capacities, and

of the norms of his membership and reference groups is essential for effective therapeutic planning.” (p. 427) They wrote

The importance of history in the development of a support plan cannot be overemphasized.

further “A behavioral analysis excludes no data relating to a patient’s past or present experiences as irrelevant. However, the relative merit of any information (e.g., growing up in a broken home or having had homosexual experiences) lies in its relation to the independent variables which can be identified as controlling the current behavior which requires modification. The observation that a patient has hallucinated on occasions may be important only if it has bearing on his present problem.” (p. 438)

The importance of history in the development of a support plan cannot be overemphasized. For example, a woman with a severe disability was referred because she refused to go to the workshop. We were asked to conduct an assessment and design a plan to get her back to the workshop. The behavioral assessment identified that problem began after her mother passed away. Given this information, a consequence based behavior support plan was not recommended. Instead, grief counseling along with extra support in the home were recommended. The history suggested that a consequential approach to the problem was not recommended. In

another instance, a 7-year-boy was referred because he refused to go to school. Every effort to get him to school had been unsuccessful. Exploration of the history of the problem with his parents suggested that he was not simply refusing to go to school, he was avoiding a threatening world made up of “large, dangerous, dogs.” (He had an unpleasant experience with a 200 lb. St. Bernard one morning before school). Given this information, a reinforcement program for going to school was not recommended. Rather, a counterconditioning plan was recommended and carried out successfully. The history of the problem suggested a starting point for the support plan.

History is not unimportant. Consequently, when conducting a functional analysis it is important to gather information regarding the history of the challenging behavior. Some of the questions we need to ask include the following: When did the behavior first appear? How long has the behavior been evident? Have there been recent increases or decreases in the behavior? Have there been any environmental, physical, or emotional changes that may have influenced the behavior? Knowledge regarding the history of the problem may be helpful in the design of a support plan. For example, a better understanding of the duration of the problem may help predict the probability of success of a support plan and the setting of realistic objectives for the plan with regards to rapid control, durability, generalization, side effects, social validity and clinical/educational validity, including the short and long-term effects on the person’s quality of life (LaVigna and Willis, 1995). Knowing about the conditions that surrounded the onset of a

challenging behavior can also be helpful in understanding its meaning for the person.

3. **Antecedent Analysis.** The Functional Analysis also involves the identification of events that occur before the behavior of interest (i.e., antecedents) that may result in the behavior appearing, being absent, increasing, or decreasing. This analysis attempts to answer several questions, including “In what settings or places is the behavior more or less likely to occur?” “With whom is the behavior more or less likely to occur?” “At what times is the behavior more or less likely to occur?” “What events, activities, interactional styles, etc. increase or decrease the likelihood of the behavior?” Thus, the Antecedent Analysis focuses on determining the person(s), places, times, activities, events, interactional styles, etc. that make the behavior more likely to occur and/or to escalate and those that make the behavior less likely to occur and/or to escalate.

While an antecedent analysis is well recognized as a fundamental component of a functional analysis, it is difficult to do well. Without proper training, we ask the wrong questions or we simply don’t know what questions to ask. We frequently ask parents “What sets off the behavior?” And we are surprised when they say “We don’t know!” or “Everything!” Without proper training, records and interviews often do not easily yield useful information. The following discussion may be helpful for future antecedent analyses.

Nothing Is Perfect. People mistakenly think that for an event to have an antecedent relationship with a behavior, that the relationship has to be a perfect one. That is, that the presence of

an antecedent indicates that the behavior is either *certain to occur* or, alternatively, *certain not to occur*. However, an event is considered to have an antecedent relationship with a behavior when that antecedent changes the probability of that behavior's occurrence, making it either *more likely to occur* or, alternatively, *less likely to occur*. Not seeing perfect relationships, that is, always seeing exceptions, we often overlook those events that do, sometimes very dramatically, effect the probability of a behavior's occurrence.

Antecedents May Be Complex. Secondly, often there are complexes of antecedents, rather than isolated antecedents that effect the probability of behavior. This also sometimes makes it difficult to identify antecedent events. For example, a person may be more likely to exhibit challenging behavior if he or she is criticized for doing something wrong, when they are ill or otherwise not feeling well. In this situation, there are two antecedents. The first is a more distant **setting event**, i.e., being ill or otherwise not feeling well, e.g., not getting enough sleep the night before; the other is a more immediate **antecedent event**, i.e., being criticized. Neither of these antecedent events may by themselves increase the likelihood of challenging behavior. When the person is feeling well, they may be very able to tolerate criticism without exhibiting challenging behavior, and as long as they aren't criticized, they may be very able to tolerate not feeling well without exhibiting challenging behavior. It is only when both antecedents events occur in concert that the probability of behavior is increased. We often look for single antecedents rather than for multiple antecedents; which is why we often fail to

identify the more typical multiple antecedents that exist.

Not Just In The External World. Traditionally, we have tended to limit our antecedent analysis to the external environment (i.e., who, what, where, when). But antecedent events can occur in three domains: organic/health domain, external domain, cognitive/mental domain. For example, we are sure you would agree that your everyday behavior is influenced by how you feel, whether you are feeling good or not, whether you are ill or not, whether you have had enough sleep, and whether you are in pain. Physical factors can play an antecedent role, in other words. Similarly, what you believe or how you perceive an event can influence your behavior. For example, if you were told that a person you had just met is manipulative, you might reject a present because you believed you were being manipulated. A parent might be more likely to punish their child more severely if they believe the child was being "willful." And we might be more likely to react negatively to a misbehavior if we believe that the child did it "on purpose." In other words, behavior is influenced by "cognitive antecedents." Our lack of attention to organic and mental antecedents can be a major barrier to a good antecedent analysis, i.e., understanding the antecedent events that affect the likelihood of a behavior.

The Cart Before The Horse. An antecedent analysis should follow information gathering, it shouldn't precede it. Often, the first question we ask is "...under what circumstances is this behavior more or less likely to occur." Before we ask questions like these, however, we should first gather information about the time of day, place,

activity, people, interactions, style, etc. that are observed to be occurring during or prior to an episode of challenging behavior. We would also want to know these things for when the behavior is not occurring. That is, we should describe before we analyze. After we describe the details of the situations we observe prior to and during **specific** behavioral episodes and the details of the situations we observe during **specific** times when the behavior is not occurring, then we can attempt to identify the events which tend to be present during or prior to an episode, but not otherwise, and those that don't, but not otherwise. It is only at this point that we may be able to identify the events that have an antecedent relationship with the behavior.

*...we should describe
before we analyze.*

However, if we haven't gathered the information, if we instead begin with the conclusionary question "...under what circumstances is this behavior more or less likely to occur," we may very well conclude that "...no antecedents can be identified."

Interactional Effects And Escalation, an antecedent analysis may be further complicated in that antecedents may interact with a complex, sometimes escalating pattern of behavior. Given an identified challenging behavior, most of us have often noticed that sometimes the behavioral episodes are relatively mild and are over in a relatively short period time and sometimes they are quite severe and continue for an extended period of

time. An antecedent analysis should not only identify the antecedents associated with the higher and lower likelihood of the start of a behavioral chain, including its precursors, but also

...[antecedent analysis] can be critical for developing an effective support plan.

those antecedents associated with the greater likelihood that the episode will escalate and those antecedents associated with the greater likelihood that the episode will be relatively mild and be resolved relatively quickly. For example, the interactional style that parents or staff use may very well affect the escalating pattern of behavior, just as the escalating pattern of behavior may affect what parents and staff say and do and how they say it and do it.

For example, aggression i.e., hitting others, may be the last link in a behavioral chain that follows a typical *course* for a particular client:

- a. Refusal to do a task.
- b. Profanity and verbal threats.
- c. Attempts to physically leave the environment.
- d. Breaking and throwing objects.
- e. Hitting others.

In this situation, an antecedent analysis should identify those things that are associated with a greater likelihood that behavior “a” will occur and those things associated with a greater likelihood that behavior “a” *will not* occur. However, given that behavior “a” *does* occur, an antecedent analysis would continue to identify those things that are associated with a greater likeli-

hood that behavior “b” will occur and those things associated with a greater likelihood that behavior “b” *will not* occur; and given that behavior “b” *does* occur, identify those things that are associated with a greater likelihood that behavior “c” will occur and those things associated with a greater likelihood that behavior “c” *will not* occur; and so on. Further, this analysis would be necessary regardless of whether the referral problem was “Refusal to do a task” or “Aggression.” (If the referral problem was “refusal to do a task,” some of this may be included as part of the *consequence analysis*.) This complex, interactive, antecedent analysis would also need to follow, as described above, information gathering for the occurrence and non-occurrence of each of the separate components of the sequence, given the occurrence of the preceding component.

As we can see from the above, an antecedent analysis may be quite involved. However, it can be critical for developing an effective support plan. For example, knowing that criticism is an antecedent to challenging behavior, a comprehensive support plan could, among other things, include guidance to staff on how to provide corrective feedback to the person, positive programming strategies to teach the person more effective ways for tolerating and coping with criticism, as he or she is likely to experience in their interaction with other people, as we all do, possible incentives for using the new coping strategies, etc. That is, a comprehensive antecedent analysis can provide information that can be useful in avoiding or minimizing the occurrence of challenging behavior and helpful in telling us what skills may be useful to the per-

son in their desire to break the barriers to social and community integration that their challenging behaviors may have created for them.

4. **Consequence Analysis.** Analysis in this area is designed to determine the possible consequences that strengthen or suppress the behavior or its alternatives. The questions that are addressed here include: a) What consequence(s) does the behavior have for the person; b) What consequence would the removal of the behavior have for the person and for the key people in the person’s life; c) What is the reaction of other people to the behavior; d) What attempts have been made in the past to control or change the behavior; and e) how have these attempts been implemented and with what outcomes?

As with the antecedent analysis, the consequence analysis follows an information gathering phase in which we first ask what does happen following an episode of behavior, i.e., what occurs when the behavior occurs. Sometimes, something is added or gained after the occurrence of a behavior and sometimes something is stopped or avoided after the occurrence of a behavior. For example, we may observe and note that when the behavior occurs, people look at and/or come closer to the person, the person is given something to eat or something else, someone hugs, touches, or even physically restrains the person, the environment changes or is changed in some way, some problem is solved, a conversation begins, etc. Alternatively, perhaps a request is rescinded, the person is sent to a different area, an activity is discontinued, either temporarily or for the day, stress is reduced, the person is left alone, the radio or TV is turned off, etc. These events

may help us to identify the consequences that strengthen or suppress the behavior or its alternatives. Knowing and understanding these consequences can then contribute to an understanding of meaning.

5. **Impressions and Analysis of Meaning.** When a functional analysis is carried out within the context of a comprehensive behavioral assessment, including a thorough skills analysis, an analysis of the relevant background information, a motivational analysis, an ecological analysis, and a mediator analysis, it is time to infer the meaning of the behavior for the person. The concept of behavioral meaning is not new to the field of operant psychology. The meaning of behavior can be found in its consequences *under certain conditions*. The process of behavioral assessment and functional analysis is to understand those consequences and the conditions which surround them. The inference that is drawn from this process may conclude that the behavior is the person's way, for example, of communicating, of relieving stress, of playing or otherwise interacting with others, etc. Other assessment approaches may also result in hypotheses or inferences about meaning, but they are either limited in the data base from which the inference is formed or the hypothesis is limited to an a priori set of possibilities that may be too broad or general to be helpful (e.g., Durand, 1990; O'Neill et al., 1990; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982).

For example, to simply conclude that a person engages in a particular behavior to get out of or to avoid a task may lead to a much different support plan than one which was further informed by knowing whether such "task avoidance" behavior was influ-

enced by how the request was made, by who makes the request, by what is being interrupted when the request is made. The support plan would also be strengthened by knowing what tasks, styles, circumstances, etc. make the performance of a requested activity more likely, not less likely to occur, i.e., those circumstances that lower the probability of the challenging behavior. Further, a comprehensive assessment leading to an inference as to the specific meaning of the behavior for the person, rather than ascribing a generic function to it from a limited list of a priori possibilities, reduces the possibility that a total misunderstanding may occur. For example, the non-performance of a requested activity, often labeled "noncompliance," may indicate that the person doesn't want to do what is being asked, (for one or more of any number of reasons), that the person doesn't understand what is being asked, that the person doesn't know how to do what is being asked, etc. In this case, to understand the meaning of the behavior requires more than just knowing that it occurs when a request is made. A complete analysis of their skills, an analysis of all the background information, an ecological analysis, and all the rest would be necessary for maximizing the likelihood that a correct inference can be drawn about the meaning of the behavior for that particular person.

The inference of meaning that is drawn from an assessment forms the basis for the development of a support plan, including both proactive (ecological, positive programming and focused support) and reactive strategies (LaVigna, Willis, & Donnellan, 1989; LaVigna & Willis, 1995). We believe that the effectiveness of a support plan is

enhanced by the quality and comprehensiveness of the assessment that has been carried out and the validity of the inferences drawn as to the meaning of the behavior for the person. The ultimate test of the validity of the assessment process and the resulting inferences is its contribution to the effectiveness of the support plan in producing the desired outcomes (LaVigna & Willis, 1995).

Summary and Conclusions

The contribution of an assessment process to the effectiveness of a support plan is referred to as its "treatment" utility, an area of research that is in its infancy in the field of challenging behavior (Ballmaier, 1992; Hayes, Nelson, & Jarrett, 1987; 1989). In that regard, the "treatment" utility of the assessment process described above has not yet been subjected to the most rigorous empirical tests. It nevertheless has face and content validity (Ballmaier, 1992). We believe this face and content validity will be increased as we expand different elements of this assessment process in more detail in future issues of this newsletter. Specifically, we are preparing articles that further elaborate antecedent analysis, ecological analysis, and mediator analysis. These have been the areas that people have seemed to be the most interested in having us elaborate. If there are other areas that you would like us to address, please let us know.

To summarize, there are two phases in the IABA behavioral assessment and functional analysis process. The first is a comprehensive information gathering phase, in which information is gathered through interviews and questionnaires, records review, direct observation, and interactions with the focus person. The second is the summary, synthesis and analysis of the information gathered in a formal assessment report following a particular format. The Behavior Assessment Guide (Willis et al., 1993) was developed to assist in this two phase process. In its fifth revision, the current 1993 edition provides both an informa-

tion gathering and records abstraction tool *and* a writing guide for preparing the formal report.

Earlier, we stated that we believed this process, when done correctly, was time consuming. Accordingly, to be used most cost effectively, it should be used when any of the criteria described in Part I have been met. We would like, at this time, to offer some additional suggestions for the organization of support services for people who have challenging behavior. We believe that if the following services are arranged, the need for the more time consuming and comprehensive process we have described here should be manageable within the resources that are typically available. Conversely, it is the lack of one or more of the following service features which taxes services and agencies and the staff that work within them. Which of the following does your system have and which doesn't it have?

1. A carefully thought out and written service design and plan based on the principles of Social Role Valorization and current practices in the field that have been developed to help people of various ages and characteristics in a variety of home, school, work and community settings. For example, we have developed a supported employment service which we offer to those adults who have been referred to us for support during those hours that most adults work, i.e., Monday through Friday, nine to five. We have also developed a supported living service which we offer to adults who have been referred to us for residential support. In our supported living service, a standard, i.e., a designed (planned) element of that service is the development of a Positive Futures Plan (Mount & Zwernik, 1988; Patterson, Mount, & Tham, 1988; O'Brien & Lovett, 1992). In contrast to the typical agency or systems driven "Individualized service plan," the Positive Futures Plan is driven by the person

and their aspirations for the future. We believe that an agency that carefully thinks through how it wants to provide services, articulates its philosophy, and writes out its plan and design of services is not as likely to arrange situations that themselves may generate challenging behavior,

...it is the lack of one or more of the following service features which taxes services and agencies and the staff that work within them.

as would be agencies that are not guided by a coherent and articulated philosophy and plan, leaving them more vulnerable to idiosyncrasies of the staff who happened to be assigned to a particular area.

2. For those people whose challenging behavior persists in spite of the articulation of a coherent philosophy and service design and plan, we suggest a level of assessment and planning that may preclude the need for more formal and time consuming efforts. There are a number of assessment methods and strategies that do not require specialized training and that are very practical in terms of time and resources, that may provide a critical mass of information to form the basis for designing an effective support plan employing both proactive and reactive strategies (LaVigna and Willis, 1995). This could be carried out by people who are at or very near the direct service level, such as classroom teachers, group home staff, etc. It would involve such strategies and methods as A-B-C (antecedent-behavior-consequence) analyses, the MAS (Motivational Assessment Scale [Durand, 1990]), the O'Neill et al. (1990) process, scattergraph analysis (Touchette et al., 1985), use of a communication grid (Donnellan et al., 1984), reviewing speech and lan-

guage assessments, reviewing psychological assessments, etc. This level of assessment may also include the collection of information using the Behavior Assessment Guide (Willis et al., 1993), precluding the summary, synthesis, and analysis of this information in a comprehensive assessment report. To pickup again on the puzzle metaphor that we introduced in Part I, sometimes it is possible to tell what the picture is when only some of the pieces have been gathered and put together. We believe that an agency that incorporates into its design of services, methods for determining

the meaning of a person's behavior and the function it serves and explicit guidelines for the development of multielement support plans based on this person centered understanding of behavior, is more likely to resolve problems than one that does not.

3. We believe that agencies that follow the suggestions above will find that the number of referrals for a more comprehensive assessment will be sharply reduced. However, we would like to suggest one more set of recommendations which can reduce the number of people who would meet the criteria described in Part I for a full assessment. This additional but critical recommendation would be the development and implementation of a quality management system, such as the Periodic Service Review (PSR) system (LaVigna, Willis, Shaull, Abedi, & Sweitzer, 1994), that assures the consistent implementation of a both general and individual service plans. Many agencies already have written service philosophies and service designs and plans and/or make some effort at functional analysis and understanding the meaning of behavior and design some degree of multielement support plans, as evidenced by a written plan. However, our experience with hundreds of agencies and

what many more hundreds of agencies report to us is that a very small percentage of a written plan, either general or individual, moves from paper to practice. For an agency that is considered good, the expectation of implementation may be anywhere from 35% to 50%. That is, *good agencies move 35% to 50% of their general and individual service plans from paper to practice*. Accordingly, even if you are a good agency, with a written philosophy and service plan and with individualized support plans based on some reasonable methods of assessment, you will have excessive numbers of people who meet the criteria for referral for a comprehensive assessment, unless you have a total quality management system in place, such as the PSR, to assure consistency and quality in staff's provision of services and in the implementation of service plans.

We believe that if the recommendations described above are followed, most systems would have the resources to carry out a full assessment for the remaining people who meet one of the three criteria. However, we would suggest that this comprehensive assessment, including both the information gathering phase and the analytic report writing phase (Willis et al., 1993), be carried out by a qualified person who has been trained to carry out this process. Further, we suggest that, if possible, this not be the person who has carried out the less comprehensive assessments for the person being referred. This is because other assessment processes may have led to some preconceptions about the meaning of the behavior. The comprehensive assessment process we have described above requires that conclusions about function are reached after the information has been gathered and analyzed, rather than starting the process with preconceptions and expectations. The person needs to be able to see past such premature, con-clusionary labels such as "noncompliance," "inappropriate attention seeking," "self stimulation," "task avoidance," and the like. Conclusions about function and meaning should come as a result of the assessment process rather than serve as its starting

point. This may be difficult for someone who has already reached a conclusion using a different, perhaps less comprehensive assessment process than the one being recommended here as part of our model for breaking the barriers to social and community integration (LaVigna and Willis, 1995).

References

- Barker, R. G. (1968). *Ecological psychology*. Palo Alto, CA: Stanford University Press.
- Ballmaier, H. (1992). *Psychometric characteristics of the behavioral assessment report and intervention plan evaluation instruments*. Unpublished doctoral dissertation, Pepperdine University, Malibu, California.
- Baumeister, A. A., and Forehand, R. Stereotyped acts (1973). In N. R. Ellis (Ed.) *International Review of Research in Mental Retardation (Vol 6.)*. New York: Academic Press.
- Carr, E. G., and Durand, M. V. (1985). Reducing Behavior Problems Through Functional Communication Training. *Journal of Applied Behavior Analysis*, *18*, 111-126.
- Carr, E. G., Levin, L., McConnachie, G., Carlson, J. L., Kemp, D. C., and Smith, C. C. (1994). *Communication-Based Intervention for Problem Behavior: A User's Guide for Producing Positive Change*. Baltimore: Paul H. Brookes Publishing Company.
- Carr, E. G., and McDowell, J. J. (1980). Social control of self-injurious behavior of organic etiology. *Behavior Therapy*, *11*, 402-409.
- Carr, E. G., and Newsom, C. D. (1980). Demand-related tantrums: Conceptualization and treatment. *Behavior Modification*, *9*, 403-426.
- Carr, E. G., Newsom, C. D., and Binkoff, J. A. (1976). Stimulus control of self-destructive behavior in a psychotic child. *Journal of Abnormal Child Psychology*, *4*, 139-153.
- Carr, E. G., Newsom, C. D., and Binkoff, J. A. (1980). Escape as a factor in the aggressive behavior of two retarded children. *Journal of Applied Behavior Analysis*, *13*, 101-117.
- Cautela, J. R. (1984). General level of reinforcement. *Journal of Behavioral Therapy and Experimental Psychiatry*, (2), 109-114.
- Donnellan, A. M., Miranda, P. L., Mesaros, R. A., and Fassbender, L. L. (1984). Analyzing the Communicative Functions of Aberrant Behavior. *Journal of The Association for Persons with Severe Handicaps*, *9*, 201-212.
- Durand, V.M. (1990). *Severe behavior problems, a functional communicative approach*. New York: Guilford Press.
- Durand, V. M., and Crimmins, D. B. (1988). Identifying the variables maintaining self-injurious behavior. *Journal of Autism and Developmental Disorders*, *18*, 99-117.
- Favell, J. E., McGimsey, J. F., and Schell, R. M. (1982). Treatment of self-injury by providing alternate sensory activities. *Analysis and Intervention in Developmental Disabilities*, *2*, 83-104.
- Goetz, L., Schuler, A., and Sailor, W. (1983). Motivational considerations in teaching language to severely handicapped students. In M. Hersen, V. B. Van Hasselt, and J. L. Matson (Eds.), *Behavior therapy for the developmentally and physically disabled*. New York: Academic Press, pp. 57-77.
- Hayes, S.C., Nelson, R. O., & Jarrett, R. B. (1987). The treatment utility of assessment: A functional approach to evaluating assessment quality. *American Psychologist*, *42*(11), 963-974.
- Hayes, S.C., Nelson, R. O., & Jarrett, R. B. (1989). The applicability of treatment utility. *American Psychologist*, *44*, 1242-1143.
- Holmes, T. H., and Rahe, R. (1967). *Schedule of Recent Experience (SRE)*. Unpublished manuscript. Seattle: University of Washington School of Medicine.
- Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1982). Toward a functional analysis of self-injury. *Analysis and Intervention in Developmental Disabilities*, *2*, 3-20.
- Kanfer, F. H., & Saslow, G. (1969). Behavioral diagnosis. In C. M. Franks (Ed.) *Behavior Therapy: Appraisal and status*. New York: McGraw-Hill.
- Kazdin, A.E., (1994) *Behavior Modification in Applied Settings*. Pine Grove, California, Brooks/Cole Publishing Company
- Koegel R. L., and Mentis, M. (1985). Motivation in child autism: Can they or won't they? *Journal of Child Psychology and Psychiatry*, *8*, 185-191.
- LaVigna, G. W., & Donnellan, A. M. (1986). *Alternatives to punishment: Solving behavior problems with nonaversive strategies*. New York, NY: Irvington Publishers.
- LaVigna, G. W., and Willis, T. J. (1995). Challenging behavior: A model for breaking the barriers to social and community integration. *Positive Practices*, *1*(1), 1, 8-15.
- LaVigna, G. W., Willis, T. J. and Donnellan, A. M. (1989). The role of positive programming in behavioral treatment. In E. Cipani (Ed.), *Behavioral Approaches to the Treatment of Operant Behavior*. AAMD Monograph series, American Association on Mental Deficiency.
- LaVigna, G.W., Willis, T.J., Shaul, J.F., Abedi, M., & Sweitzer, M. (1994). *The periodic service review: A total quality assurance system for human services and education*. Baltimore: Paul Brookes Publishing Co.
- LaVigna, G. W., and Willis, T. J. (1982). *Community Behavioral Services*. An unpublished service description. Van Nuys, CA: Behavior Therapy and Family Counseling Center.
- Martin, P. L., and Foxx, R. M. (1973). Victim control of the aggression of institutionalized retardates. *Journal of Behavior Therapy and Experimental Psychiatry*, *4*, 161-165.
- Mash, E. J., and Terdal, L. G. (1981). Behavioral Assessment of Childhood Disturbance. In E. J. Mash and L. G. Terdal. *Behavior Assessment of Childhood Disorders*. New York: The Guilford Press, pp. 3-76.
- Mount, B., & Zwernik, K. (1988). *It's never too early, it's never too late: an overview of personal futures planning*. Minnesota Governor's Planning Council on Developmental Disabilities, 658 Cedar Street, Saint Paul, MN 55155.
- O'Brien, J. and Lovett, H. (1992). *Finding a way toward everyday lives: the contribution of person centered planning*. Pennsylvania Office of Mental Retardation, 569 Commonwealth Avenue, Harrisburg, PA 17120.
- O'Neill, R. E., Horner, R. H., Albin, R. W., Storey, K., & Sprague, J. R. (1990). *Functional analysis of problem behavior: A practical assessment guide*. Baltimore: Brookes/Cole Publishing.
- Passman, R. H., and Mulern, R. K. (1977). Maternal punitiveness as affected by situational stress: An experimental analog of child abuse. *Journal of Abnormal Psychology*, *86*, 565-569.
- Patterson, G.R., Littman, R. and Hinsey, C. (1964) Parental effectiveness as reinforcers in the laboratory and its relation to child-rearing practices and child adjustment in the classroom. *Journal of Personality*, *32*, 182-199.
- Patterson, J., Mount, B., and Tham, M. (1988) *Personal Futures Planning*. A mini-handbook of developed for the Connecticut "Positive Futures" Project. Connecticut Department of Mental Retardation, 90 Pitkin Street, East Hartford, CT 06108.
- Reichele, J., and Wacker, D. P. (1993). *Communicative Alternatives to Challenging Behavior*. Baltimore: Paul H. Brookes Publishing Company.
- Rhodes, W.C., (1967). The disturbed child: A problem of ecological management. *Exceptional Children*, *33*, 449-455.
- Rincover, A., and Devaney, J. (1982). The application of sensory extinction procedures to self-injury. *Analysis and Intervention in Developmental Disabilities*, *2*, 67-81.
- Rogers-Warren, A., & Warren, S. F. (1977). *Ecological perspectives in behavior analysis*. Baltimore: University Park Press.
- Schwartz, A., Goldiamond, L., & Howe, M. W. (1975). *Social casework: A behavioral approach*. New York: Greenville University Press.
- Scott, M. (1980). Ecological theory and methods for researching special education. *The Journal of Special Education*, *4*, 3.
- Willis, T. J., & LaVigna, G. W. (1984). *Behavior assessment guide*. Van Nuys, CA: Behavior Therapy and Family Counseling Center.
- Willis, T. J., LaVigna, G. W., & Donnellan, A.M. (1993). *Behavior assessment guide*. Los Angeles: The Institute for Applied Behavior Analysis.

Definition of a Problem Behavior

Editors' Note: This issue's definition of a problem behavior is interesting on a number of counts. Although the focus person was a young man in his twenties, his primary challenging behavior was something that had been in his repertoire since early adolescence. Although it had its ups and downs, and although it wasn't generally considered as serious a problem as it had been, in terms of both frequency and severity, in its most severe forms, it could and had resulted in the injury of another person. This may be why the referral problem was "Aggression." However, the early stages of this behavior, which only on occasion escalated to such extreme levels, typically had a more playful or teasing quality, and just as frequently, had an obvious sexual dimension. Aggression did not seem to be a useful or descriptive label for the most typical topographies identified for this problem, and may even have distracted people from focusing on its meaning. For these reasons, a different label was suggested, i.e., Inappropriate Interactions. Our recommended definition and data collection methods for this problem follow below:

Description of Behavior and Operational Definition of Inappropriate Interactions

A. *Topography.* The topographies of Inappropriate Interactions are considered to fall within five categories:

Level I - This includes verbal expressions with direct or indirect sexual content. Typical phrases would be "touch the 'P';" "pinch the nipples," "squeeze the breast," etc.

Level II - This includes pinching, grabbing, or reaching gestures directed toward people, but without an actual physical attempt to make contact. Level II would also include looking down another person's shirt.

Level III - This includes touching, pinching and/or grabbing other people in the area of their genitals or chest, or physical attempts to do so, such as when he attempts to place his hand down someone's shirt or when he grabs people by the shirt. (Level III does not include grabbing, squeezing or pinching the flesh of another person, either directly or through the person's clothing, to the point of causing pain. Rather, behavior that causes pain in this way is considered to be a Level IV response.)

Level IV - This includes squeezing, pinching, pushing and/or grabbing other people in the area

of their genitals or chest in such a way as to cause pain, such as when he actually grabs, squeezes or pinches the flesh of another person, either directly or through the person's clothing.

Level V - This includes biting, scratching, hitting, kicking or otherwise physically attacking another person who is either trying to extricate themselves from his grasp or any other such behavior that occurs in conjunction with Level I - Level IV behavior.

B. *Cycle.* An onset of Inappropriate Interactions is considered to have begun upon staff hearing a Level I behavior or upon their observing a Level II - Level V behavior. An Inappropriate Interaction is considered to be over at the end of the one-hour observation interval. Once a new hour has begun, any Level I - Level V behavior indicates a new episode of Inappropriate Interactions.

C. *Course.* In terms of the course of the behavior, some precursors have been noted. Among other things, these include his repeatedly saying "where is Bob," "squeeze hands," and engaging in body posturing. Asking to squeeze another person's hands or actually doing so, was something that was taught as an alternative to

Inappropriate Interactions and is not in itself considered to be an incident of target behavior, although it can be a precursor to target behavior. Perseverative speech and other perseverative behavior can also be a precursor. However, these precursors do not always escalate to the level of an Inappropriate Interaction. Episodes of Inappropriate Interactions can range all the way from an isolated, playful, almost teasing pinching gesture up to an extended episode that includes, in rapid (within seconds) escalation through all five levels of severity, in which he aggressively and apparently obsessively fights anyone's attempts to resist him or prevent him from engaging in the behavior. At these extreme times, he appears to be out of control and it is during these times, rare though they may be, that he can seriously injure another person. Most typically, an episode of Inappropriate Interaction includes Level I and Level II behavior. However, it is not uncommon for Level III behavior to occur. Level IV and Level V behavior are much less frequent, but when they occur, it is quite upsetting and traumatic for everybody concerned,

D. *Strength.*

- *Rate.* The rates of Inappropriate Interactions have varied considerably over the years. Exact reporting of past and present rates is difficult, however, since definitions and data collection methods have not been rigorously defined, have varied from time to time, and have not been subject to formal interobserver reliability checks. With these qualifications, Inappropriate Interactions can occur from zero to many times a day, usually at Levels I to III. As a specific estimate, which would have to be confirmed through formal data collection, currently, ten days out of each month, no occurrences of Inappropriate Interactions are observed. On days that it does occur, it occurs during 30% - 40% of the observa-

tion intervals. Levels IV and V occur, presently, approximately seven times a months.

- **Severity.** Although it is not frequent, when Level IV is reached, people can be seriously hurt. For example, his biting and scratching has caused gouged flesh. Further, given his strength and size, and especially when he is out of control, his punches can cause injury and harm requiring medical attention. At this point, however, it is only once or twice a year that this level of severity is reached, although this level of severity was more frequent in the past.

Observation and Data Collection

A. **Procedure.** For each hourly interval of the program day, from 7 A.M. to 9 P.M., and for the overnight interval between 9 P.M. and 7 A.M. the following morning, the responsibilities of Primary Observer should be assigned to a single staff person. At the end of each interval, the Primary

Observer should enter onto that day's data sheet whether or not Inappropriate Interactions occurred. If they did, the different levels that were observed during that interval should also be recorded. If Level IV or V, staff should also record whether or not first aid and/or medical attention was sought.

- B. **Graphing.** The following information should be graphed on a weekly basis:
1. % of intervals per day in which Inappropriate Interactions were observed.
 2. % of intervals per day in which Level I Inappropriate Interactions were observed.
 3. % of intervals per day in which Level II Inappropriate Interactions were observed.
 4. % of intervals per day in which Level III Inappropriate Interactions were observed.
 5. % of intervals per day in which Level IV Inappropriate Interactions were observed.
 6. % of intervals per day in which Level V Inappropriate Interactions were observed.
 7. % of intervals per day in which

Inappropriate Interactions were observed in contiguous intervals.

8. % of intervals per day in which Inappropriate Interactions resulted in the need for first aide.
 9. % of intervals per day in which Inappropriate Interactions resulted in the need for medical attention.
- C. **Reliability Check.** A second observer should be assigned one hour each week, for both day services and residential services settings, to carry out a set of independent observations as described above. These independent observations should be scheduled to include, round robin, all participating Primary Observers and representative service and community settings. The results of these independent observations should be scored on a separate data sheet. Reliability should be calculated by comparing the agreements and the disagreements as recorded on the separate data sheets. When disagreement occurs, the primary data sheet should be marked, staff training and/or clarification should be provided, and a follow-up reliability check should be scheduled within the week.

Procedural Protocols - Transition

Editors' Note: We recently worked with a 15-year-old girl who had been away from home, at a 24-hour residential school for more than four years. While the parents were very supportive of our suggestion that her needs could be better met if she lived at home and went to her local school, they were understandably concerned that wrenching her from those with whom she had established a strong, positive, and long lasting relationship could produce a negative reaction in her that would put the success of her return in jeopardy. They therefore asked us to include a "Transition Plan" as part of our recommended support plan. Because transitions from one setting to another, even a move back home, can be traumatic for the person, and result in an increase in or return of challenging behavior, we thought you would appreciate a look at how we approached it. Our recommended "Transition Plan" and supporting protocols are shown below.

In fact, Rhonda, the girl who was getting ready to move back home, never did want to see the video tapes once she had returned home. We can only speculate on how important the preparation of those tapes were for preparing her for her big move. At any rate, her return home went very smoothly, without any of the feared negative reaction nor any apparent pining for the friends she left behind. While transition protocols would of course need to vary as a function of your assessment findings and the person's individual needs and characteristics, we hope you find the following of interest.

Transition Plans:

1. **Story book:** "Rhonda moves home." This is a picture story book, using actual photographs, that tells the story of Rhonda's move back to California. This is planned as a strategy to prepare Rhonda in a positive way for this big change in her life.
2. **Memory book.** Rhonda will, with staff assistance, take photographs of Niceplace staff, and other people with whom she has a positive relationship with in Smalltown. The purpose is two-fold. On the one hand, the process of taking the pictures provides a structured opportunity for Rhonda to say good bye to all the friends she has made at Niceplace, and secondly, it will give her a positive way of remembering her friends there. Whenever, she is lonely, she can

take out her memory album and go through all of the pictures.

3. **Video taped pep talks.** This will be a video tape of one minute pep talks by Niceplace staff giving Rhonda encouragement for her move back home. She should be present when each segment of the video is made and she should have ample opportunity to view it after she has moved back home.
4. **Fading and transfer of support.** This is intended to provide a smooth transfer of support and services from Niceplace staff to California staff. The following are key components:
 - a. Alice (The Niceplace staff with whom Rhonda has the closest relationship) should accompany Rhonda back home to California.
 - b. Alice, along with designated California staff and in consultation with Rhonda's parents, should establish a schedule and routine for Rhonda that is as familiar as possible and which provides as little discrepancy as possible between Maryland and California.
 - c. Alice should transfer responsibility for the most critical components of the schedule and routine to the designated California staff:
 - 1) Alice should carry out an activity with Rhonda with California staff observing.
 - 2) California staff should carry out an activity with Rhonda with Alice observing and providing feedback as necessary and appropriate.
 - 3) California staff should carry out an activity with Rhonda, without Alice's presence, with verbal report of results to Alice for her feedback.
5. **Story book:** "Rhonda goes to her new school." This is a picture story book, using actual photographs, that tells the story of Rhonda's first day going to her new school. This is planned as a strategy to prepare Rhonda for this new experience. This story book should be introduced

within a couple of days of Rhonda's return to California.

Transition Protocols:

Protocol #1

Name: Rhonda Brown

Date Protocol Developed: Feb. 21, 1995

Protocol Name: Story Book: "Rhonda Moves Home"

Materials: Story Book, Data Sheet

Schedule: Once each day, beginning on Feb. 27, 1995

Steps:

1. Staff should introduce this activity to Rhonda during the scheduled time each day by saying (e.g.):
"Rhonda, its time to read your story now. Let's sit down. You have done so well here at Niceplace, so well that it is time for you to move back home to California. I know you have made a lot of friends here and will miss them a lot. We will miss you to, but we are proud of you and know that you will be good. Let's read the story."
2. Staff should read the story to Rhonda, picture by picture.
3. After staff have read the story to Rhonda, they should return to the first picture and verbally prompt Rhonda to tell the story in her own words, picture by picture. Verbal prompting should be used, if necessary, to get Rhonda to advance the story appropriately, with reference to each of the pictures in turn.
4. After Rhonda has told the story in her own words, staff should conclude the session by saying (e.g.)
"Wasn't that a nice story about you moving home. We can read it again tomorrow. Thank you."
5. Record results of session on prepared data sheet.

Comments: A pleasant, happy, and relaxed tone and manner should be used to convey that Rhonda's move back home to California is a good and happy thing and something for her to look forward to.

Protocol #2

Name: Rhonda Brown

Date Protocol Developed: Feb. 21, 1995

Protocol Name: Memory Album

Materials: Polaroid Camera, Photo Album

Schedule: At least once each day, beginning on Feb. 27, 1995

Steps:

1. Staff should discuss the plan to create a "Memory Album" with Rhonda (e.g.):
"Let's make an album for you to take home to California with pictures in it of all of your favorite people here at Niceplace."
2. Have Rhonda verbalize to staff who she would like to include in her "memory album."
3. Seek out one the people who have been identified by Rhonda as someone she would like to remember with a picture.
4. Provide the camera for the picture to be taken.
5. Take a picture of that day's subject. Staff should say to the person whose photo is going to be taken (e.g.):
"May Rhonda take your picture to include in her "memory album," so that she can have something to remember you by when she moves home to California?"
6. Initially, staff may need to take the picture with Rhonda looking on. However, as the days progress, with verbal and physical prompting, staff should encourage Rhonda to take the picture herself, i.e., sighting in with the view finder, pressing the button, gently removing the picture without touching the print, etc.
7. After a picture has been taken of that day's subject, staff should take a picture of that person with Rhonda. That is, there should be two pictures of each person that Rhonda wants a memory of, one by themselves and one with Rhonda.
8. Let Rhonda place the pictures in her album when they have dried.
9. Staff should say (e.g.):
"Thank you Rhonda. Let's put the album in a safe place so that we can use it again tomorrow."

10. Continue this process until all pictures have been taken and assembled.
11. Have Rhonda carry album with her on the plane trip home.

Comments: It is only a secondary goal that Rhonda learn to use the camera and to take pictures independently. Priority should be given to the process of compiling her "memory book."

Protocol #3

Name: Rhonda Brown

Date Protocol Developed: Feb. 21, 1995

Protocol Name: Motivational Video

Materials: Blank video tape, Camcorder

Schedule: At least 1 one-minute video segment each day, beginning on Feb. 27, 1995

Steps:

1. Identify "camera" person/director. This should be someone sympathetic to Rhonda need to have as much support as possible to make her move back to California successful.

2. This director should identify people who have key personal relationships with Rhonda at Niceplace and discuss with them taking the opportunity of recording a short one-minute "pep talk" to Rhonda about her move home.
3. It should be pointed out to them that the purposes of this "pep talk" are to:
 - a. Have Rhonda view the move as a wonderful and positive step that is occurring because she has done so well and is ready to go back home to live with mom and dad.
 - b. To motivate her to do well back home and to remember all the good things she learned while at Niceplace.
 - c. To remember that she has a lot of friends at Niceplace who will miss and remember her and who are rooting for her to do well.
4. The director should assure in the "prep" meeting that the person will be sincere in expressing these kinds

of sentiments and won't be communicating any negative verbal or non-verbal messages about Rhonda's move back to California.

5. Rhonda should not be present or be able to listen in on the preliminary meeting.
6. The camera person/director should then set an appointment with the person at which time the one-minute segment will be "shot."
7. The video tape should be recorded with Rhonda present.
8. She should be told that _____ wants to say good-bye to her and to wish her well.
9. Assure that the tape receives safe passage back to California.

Comments: The tape will be played for Rhonda whenever she wants to see it, when she seems to be melancholy about not being at Niceplace, when she been successful with something, etc. It will be one way of staying connected to many of the people who have been important to her and who truly wish her well.

IABA

Make your plans now to attend the Eighth Annual Summer Institute on

Assessment & Analysis of Severe & Challenging Behavior

**July 28 – August 10, 1996
Los Angeles, California**

For a complete description of the course, registration procedure and fees, contact:

**John Q. Marshall, Jr., Seminar Coordinator
Institute for Applied Behavior Analysis
PO Box 5743**

**Greenville, SC 29606-5743 USA
Telephone: (864) 271-4161 • Fax: (864) 271-4162**

TASH Ad

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 a multielement non-aversive support plan.

Los Angeles • July 28 - August 10, 1996
London • October, 1996

Positive Approaches to Solving Behavior Challenges and The Periodic Service Review

Gary W. LaVigna & Thomas J. Willis

Positive Approaches... are 2 and 3 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. The Periodic Service Review is a 1 day seminar that teaches participants a staff management system that ensures the agency/school is providing quality services.

April, 1996 - US Seminars (Chicago, Ill., Minneapolis, Minn., Green Bay, Wis.)

May, 1996 - US Seminars (Manchester, NH, Austin, Tex., Little Rock, Ark.)

June, 1996 - UK Seminars (London, Taunton); US Seminars (Los Angeles)

July, 1996 - US Seminars (Sacramento, Ca., Philadelphia, Pa.)

August, 1996 - US Seminars (Colorado)

October, 1996 - UK Seminars (Manchester, Sheffield, Telford, Edinburgh, Cardiff, London); Norway Seminars (Oslo)

November, 1996 - Australian Seminars (Perth, Townsville, Brisbane)

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

John Q. Marshall, Jr., Seminar Coordinator
Institute for Applied Behavior Analysis
PO Box 5743

Greenville, SC 29606-5743 USA

Telephone: (864) 271-4161

Fax: (864) 271-4162

Internet: jmarshall@iaba.com

Toll Free (USA and Canada): (800) 457-5575

In Australia - Jeffrey McCubbery (054) 395 305

In England - Cherry Connell (01562) 747 881

Multimedia Training Programs

Competency Based Training Program

This is a systematic, criterion-referenced, self-instructional multimedia course for staff development that is customized to your agency. It is being used by adult service agencies and schools in Australia, Great Britain, Spain and the US. \$1,500.00

For more information on the CBT, contact:

Diane Sabiston

Institute for Applied Behavior Analysis

PO Box 30726

Savannah, GA 31410-0726 USA

Telephone: (912) 898-0390 • Fax: (912) 898-8077

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:

John Q. Marshall, Jr., Seminar Coordinator

Institute for Applied Behavior Analysis

PO Box 5743

Greenville, SC 29606-5743 USA

Telephone: (864) 271-4161 • Fax: (864) 271-4162

Printed Resources Available from IABA

Alternatives to Punishment: Solving Behavior Problems with Nonaversive Strategies

G.W. LaVigna and 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 and 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-Schultz, 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, \$25.95/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. Shauli, 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. - \$36.00/ISBN 1-55766-142-1

Add for Shipping and Handling:

1st book (min.) \$3.00 Each add'l book \$0.50

Mail check or company purchase order to:

Institute for Applied Behavior Analysis

333 N. Lantana St. #287

Camarillo, CA 93010 USA

Tel: (310) 649-0499 • Fax: (310) 649-3109

Foreign orders must be made in U.S. currency by bank draft or international money order.

(Prices are subject to change without notice.)