The Community Inclusion Project: Comprehensive Assessment and Treatment for People with Dual Diagnosis

Michael E. May[1,3], Angela Becker[1], George Zukotynski[2], & Craig H. Kennedy[1,3]

[1] Vanderbilt Kennedy Center Behavior Analysis Clinic

[2] Tennessee Department of Mental Retardation Services

[3] Department of Special Education at Peabody College

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Introduction:

The Community Inclusion Project

In March 2002, changes were made to *Tennessee Code Annotated,* Title 33, to include mental health services for people with mental illness and co-occurring developmental disabilities (T.C.A. §33-3-219) . The expansion in definition of service eligibility prompted the development of a task force commissioned to study the mental health supports available to people with co-occurring disabilities (hereafter referred to as “dual diagnoses”). One of the objectives of this task force was to identify best practices for service delivery to this population. The purpose of this chapter is to provide an overview of the funding resources and how the Community Inclusion Project (CIP) was developed.

The Tennessee Department of Mental Retardation Services (DMRS) was one of the funding resources of the CIP. The department funds, develops, and maintains services for people with mental retardation. The DMRS ensures support planning evolves around the consumer receiving services. The department is responsible for system planning, setting policy and quality standards, system monitoring and evaluation, disseminating public information and advocating for consumers who have mental retardation. The goal of these services is to ensure consumers with mental retardation and/or other developmental disabilities have a healthy and meaningful quality of life.

The Tennessee Department of Mental Health and Developmental Disabilities (MHDD) was another funding resource. The department makes available a variety of habilitation and rehabilitation services based on the needs and choices of consumers with a mental illness and/or developmental disabilities. Similar to the DMRS, MHDD is responsible for system planning, setting policy and quality standards, system monitoring and evaluation, disseminating public information and advocating for consumers. The department is also responsible for insuring quality mental health services for consumers in the community. Thus, the goal of the department is to successfully support consumers in their local community.

The Tennessee Council on Developmental Disabilities (DD Council) was the final funding resource for the CIP. The council funds projects designed to address issues important to the lives of people with developmental disabilities or mental retardation (MR). The DD Council uses federal funds to support demonstration projects with the goal of improving system coordination, community education, and policy decisions. The DD Council promotes public awareness about people with developmental disabilities or MR and inclusion of this population into community living. Finally, the DD Council assists families in identifying available resources that help support people with developmental disabilities or MR in their community.

The missions of the three agencies listed above are inter-related. Therefore the three agencies decided to promote a demonstration project aimed at identifying a best practice model for people with dual diagnoses. The goal of funding such a demonstration project was to evaluate a treatment model integrating health, psychiatric, and behavioral services for people with dual diagnoses transitioning from Middle Tennessee Mental Health Institute (MTMHI) to the community. The demonstration project was coordinated through the Vanderbilt Kennedy Center Behavior Analysis Clinic and was suitably named the Community Inclusion Project.

The primary purpose of the CIP was to provide outpatient evaluations and staff training for individuals with dual diagnoses moving from MTMHI. The outpatient evaluations were used to provide intensive staff training and monitoring of therapeutic progress, develop comprehensive support plans specifically tailored to consumer needs, and document variables related to successful community transition. The goal of the evaluations and staff training was to provide a framework for guiding collaborative service delivery among behavior analysts, psychiatrists, and medical professionals. The CIP reported quarterly to the DMRS, DMHDD, and DD Council on the status of the best practice model.

Another purpose of the CIP was to provide clinical training for behavior analysts, psychiatrists, and nurse practitioners devoted to working with people with dual diagnoses. Professionals acquired critical skills necessary to work with consumers under the supervision of board certified behavior analysts, board certified psychiatrists, and primary care physicians. The goal of providing a clinical training site was to encourage professionals to continue providing community supports in the State of Tennessee. Thus, the consumers benefiting from the CIP model would potentially grow beyond the number of consumers in the project.

The final purpose of the CIP was to identify solutions for the many barriers faced by many people with dual diagnoses and their careproviders. Therefore, this training manual was developed to outline the roles and responsibilities of support teams. The goal of the manual is to identify which professionals are responsible for services, and how to work within the framework of the policies governing health care for people with dual diagnoses. A second goal of the manual is to provide careproviders with an understanding of how independent support coordinators, behavior analysts, psychiatrists, and medical professionals can work together to reduce barriers that influence the quality of life for consumers.

II. Dual Diagnosis

Chapter One provided an overview of how the CIP was developed. This chapter will provide information about dual diagnoses, how they relate, and the complexities of distinguishing mental health problems from developmental disabilities. Mental retardation (MR) is diagnosed before age 22. A person diagnosed with MR displays significant impairments in intellectual functioning, language, and adaptive skills (American Association on Mental Retardation, 2002). In addition to intellectual disabilities, people with MR may also have other physical or cognitive disabilities, such as cerebral palsy, seizure disorders, vision impairments, or hearing loss. Causes of MR may include trauma (e.g., head injury), infections, chromosomal syndromes (e.g., fragile X syndrome), metabolic disorders (e.g., PKU), environmental toxins (e.g., lead exposure), and/or malnutrition. According to recent reports, the overall prevalence of MR in the United States is 1.6% of the total population (Fujiura, 2003). There are approximately 7,000 Tennesseans with MR receiving government funded services (Tennessee Department of Mental Retardation Services, 2006).

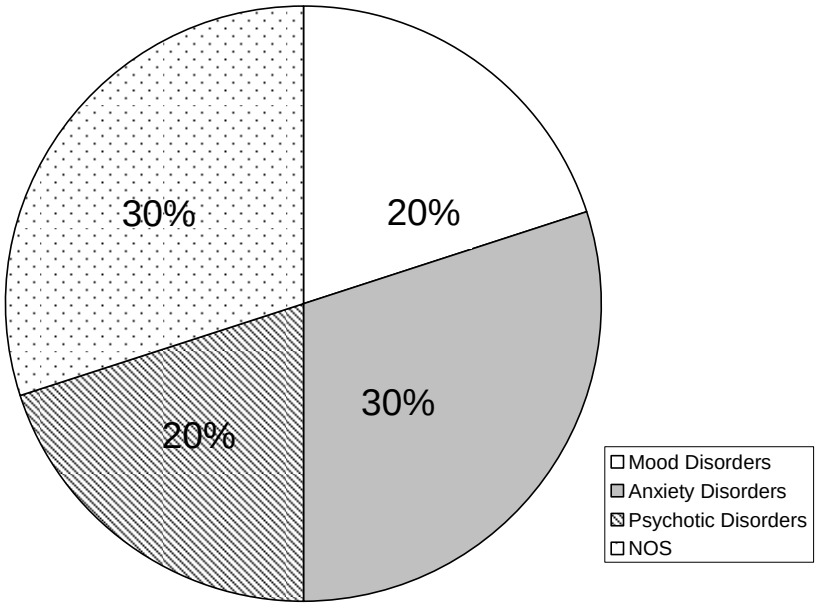
Mental illness (MI) can occur at any time during a person's lifespan and includes disorders of mood, thought, and/or behavior. MI differs from MR in that MI interferes with a person's ability to cope with daily activities, employment, and/or personal relationships, but may not interfere with cognitive functioning (APA, 2000). The MI diagnosis incorporates information about symptoms describing psychiatric categories defined by the *American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Text Revised* (DSM-IV-TR). Some of the more prominent diagnostic categories include anxiety disorders, mood disorders, psychotic disorders, and personality disorders. Although there is rarely a single cause of MI, some common factors include biological predisposition (e.g., genetics, brain function/structure), stress or trauma, and environmental events (e.g., poor living conditions). Approximately 30% of Americans 18 years of age and older are diagnosed with a MI in a given year (Kessler et al., 2005). In 2005, approximately 190,000 people were diagnosed and treated for mental health problems in Tennessee (MHDD, 2005).

Prevalence of Mental Illness in People with Mental Retardation

The term "dual diagnosis" is used to describe the co-occurrence of MR and MI. This definition is often confused with dual diagnoses involving MI and drug and/or alcohol abuse. It is not known how many people in Tennessee may have a dual diagnosis. However, the prevalence of MI among people with MR in the United States is estimated at 4 to 5 times greater than that diagnosed in the general population (Koller, Richardson, Katz, & McLaren, 1982). Other investigators have found between 15% and 40% of adults with MR display symptoms consistent with many psychiatric disorders (Borthwick-Duffy, 1994; Iverson & Fox, 1989; Reiss, 1990). Common psychiatric diagnosis categories include anxiety disorders, psychotic disorders, and mood disorders (Eaton &

Menolascino, 1982; Reiss, 1982/1990). Anxiety disorders may include obsessive-compulsive disorder and post-traumatic stress disorder. Psychotic disorders, such as schizophrenia, are more prevalent in people with severe MR. Mood disorders, such as depression or bipolar disorder, are more common in people with mild to moderate MR. Chart One displays the percentage of people with MR who also have these disorders (cf Reiss, 1982/1990). Mental health professionals may come across symptoms that are not completely indicative of one diagnostic category over another. In these cases, a diagnosis may be tentatively called “not otherwise specified,” or “NOS.” There is no clear estimate of how frequently NOS is used as a diagnostic measure. The use of the term indicates the difficulty in differentially diagnosing MI in people with MR.

Chart 1. Percentage of People with MR and a Psychiatric Disorder by Category



Diagnosing Mental Illness in People with Mental Retardation

There are several factors influencing accurate diagnosis of a MI in persons with MR. First, there may be a tendency to overlook MI in people with MR due to “diagnostic overshadowing” (Reiss, Levitan, & Szyszko, 1982). Reiss et al. (1982) showed that mental health professionals were more likely to give MI diagnoses to people without MR than to people with MR who displayed similar symptomotology. The Reiss et al. (1982) study shows that emotional and/or behavior problems indicative of MI can be misdiagnosed as severe cognitive impairment.

Another problem with accurate diagnosis is that many mental health professionals lack the training needed to assess and treat this population (Matson & Sevin, 1994). For example, mental health professionals may misinterpret unusual speech or thought processes as psychotic speech when it is really a symptom of poor receptive and/or expressive language skills. Limited intellectual abilities can influence a person’s perception of incoming stimuli, making it difficult to express ideas clearly. Thus, accurately defining symptoms may be more difficult if a mental health professional cannot distinguish MR from MI characteristics. However, the problem may also occur if symptoms of the MI (e.g., psychotic speech) are overlooked because mental health professionals consider the speech to be associated with limited intellectual functioning.

A problem related to adequate professional training is that most assessments require the articulation of symptoms defined in the DSM-IV-TR. For instance, one of the diagnostic criteria of obsessive-compulsive disorder is that the person recognizes his/her thoughts, impulses, or images are not based on actual environmental events. Although people with severe MR often cannot report complex symptoms because of limited receptive or expressive communication skills, they may still show other symptoms of obsessive-compulsive disorder, such as repetitive behaviors aimed at preventing a feared situation from occurring.

Lastly, aberrant behaviors indicative of MI may be topographically similar to those in people with MR (Moss, Emerson, Bouras, & Holland, 1997). For example, aggression is a feature of psychotic and personality disorders (Goldberg, Gitta, & Puddephatt, 1992). However, physical aggression is also commonly displayed by people with MR as a means of obtaining and/or removing stimuli from the environment. Consequently, problem behavior may be viewed solely as a learned behavior rather than a symptom of MI, or vice versa.

Assessment of dual diagnosis can be a complicated endeavor. Therefore, recent assessment models indicate multiple sources of information should be used in the evaluation of dual diagnosis (Reiss, 1993). Sources of information may include a review of treatment records, behavioral and psychiatric interviews, direct observations, and rating scales (Aman, 1991; Reiss, 1993). Chapter 5

describes the use of these sources to diagnose mental health, medical, and behavioral problems for people with dual diagnoses.

III. Dual Diagnosis and Problem Behavior

A variety of conditions influence the occurrence of problem behavior. Some of these play a direct role in the selection and maintenance of behavior. For example, a person may be rewarded with a preferred activity for completing a task without engaging in problem behavior. Others set the occasion for behavior to occur, such as events that predict the availability of reinforcement. For example, a person may engage in problem behavior when a particular careprovider is present but not when other careproviders are present. Still others change the value of a reinforcer, altering the likelihood a problem behavior will occur. For example, a person may engage in problem behavior when he has had little sleep.

There are other conditions influencing the occurrence of problem behavior. One such condition is the mental health status of a person. Problem behavior is sometimes an indicator of an underlying psychiatric problem (Gardner, 2002). For example, problem behavior may be a symptom of a mood disorder. However, problem behavior typically occurs in conjunction with pathologies such as delusions, hallucinations, disorganized speech, or emotional lability, all of which are more indicative of the presence of MI. For example, someone suffering from hallucinations may perceive that people are trying to attack them, resulting in physical aggression toward others in the environment. Therefore, problem behavior is indirectly associated with psychopathology rather than a measure of it.

Another condition influencing the probability of problem behavior is the physical health of a person. Health conditions associated with problem behavior can include chronic and acute conditions. That is, such conditions can be longstanding health challenges that persist over extended periods of time (e.g., gastroesophageal reflux disease [GERD]) or be brief and transient (e.g., ear infection). Health conditions are important in understanding the occurrence of problem behavior in people with MR because these individuals have a greater rate of occurrence of special health care needs than the general population (Horwitz, Kerker, Owens, & Zigler, 2000; U. S. Department of Health and Human Services, 2000; U.S. Public Health Service, 2002). For example, 25% of adults with MR are reported to have some form of epilepsy, a prevalence rate 25 times greater than the general population (McDermott et al., 2005). Because of the greater prevalence of health care needs among people with MR, there is a higher probability that health conditions contribute to problem behavior.

In this chapter, we will review mental health, environmental functions, and health factors contributing to the occurrence of problem behavior. Because mental and physical health conditions can exist prior to the occurrence of problem behavior and precipitate their occurrence, a discussion of these conditions seems particularly appropriate within the context of antecedent influences on behavior (Valdovinos & Kennedy, 2004). It is likely that there are

combinations of biological and environmental factors that make problem behavior more likely to occur. Therefore, we suggest that multimodal assessments and interventions may provide better care for people with dual diagnoses.

Functions of Problem Behavior

Behavior analysis is based on behaviors being selected by their consequences (Skinner, 1938). The most fundamental behavioral processes involved in shaping and maintaining behaviors are positive and negative reinforcement (Catania, 1998). Positive and negative reinforcement can be further classified based on whether the reinforcement is produced directly by the behavior (i.e., nonsocial reinforcement) or requires the behavior of another person to produce reinforcement (i.e., social reinforcement) (Rapp & Vollmer, 2005). Such a conceptualization results in a two-by-two classification of reinforcement: Nonsocial positive reinforcement, nonsocial negative reinforcement, social positive reinforcement, and social negative reinforcement.

A primary reason why some behaviors are difficult to analyze is that in many instances behaviors can produce their own perceptual consequences. Nonsocial positive reinforcement occurs when a behavior is maintained by sensory consequences produced by the behavior. For example, someone may engage in self-injurious eye poking to produce visual stimulation (Kennedy & Souza, 1995). In such instances, the visual stimulation produced by eye poking positively reinforces occurrences of the behavior. Thus, when the behavior is emitted, it directly produces a positively reinforcing consequence.

Problem behavior can also occur to reduce levels of unpleasant environmental stimulation (O'Reilly, 1997; Repp, Karsh, Deitz, & Singh, 1992). Negative nonsocial reinforcement occurs when the behavior reduces unpleasant sensory stimulation. For example, a person may engage in self-injurious head banging to reduce ambient noise levels. The lessening of noise produced by banging may negatively reinforce occurrences of the behavior.

Problem behavior producing socially mediated consequences can serve a social positive reinforcement function. People obtain positive reinforcement (e.g., preferred items or social interactions) by changing the behavior of other people in their environment. For example, a person may engage in aggression when he wants a piece of candy. When the candy is given to the person, it increases the likelihood he will engage in aggression the next time he wants some candy.

Similarly, problem behavior producing socially mediated consequences can serve a negative social reinforcement function. Problem behavior is negatively reinforced by escape or avoidance of demands placed on an individual by his social environment. For example, a person may engage in head banging when asked to do physical therapy exercises. Removal of demands to

exercise contingent upon head banging increases the likelihood the behavior will be used to escape or avoid demands in the future.

In most cases, problem behavior is maintained by social positive or social negative reinforcement (Derby et al., 1992; Iwata et al., 1994). When problem behavior is maintained by social reinforcement, interventions often involve interrupting the behavior-consequence relation while simultaneously reinforcing an alternative behavior (i.e., replacement behavior). However, behavior functions can change over time. Thus, intervention should be viewed as a long-term process rather than a quick solution to end all problem behavior. Identifying functions of problem behavior often requires the expertise of a behavior analyst trained to use functional analysis methodology.

Although problem behavior can serve social and nonsocial functions, it is possible the behaviors are also indicative of MI. Collaborative evaluations between a psychiatrist, behavior analysts, and others may determine the extent to which problem behavior is associated with environmental consequences versus MI. If problem behavior is unrelated to social consequences, it is possible that mental health needs have not been met. Thus, psychiatric evaluation may be helpful for targeting specific symptoms of MI and/or problem behavior maintained by nonsocial consequences (Matson et al., 2000; Pyles et al., 1997).

Mental Health and Problem Behavior

Problem behavior in people with dual diagnoses may be related to specific mental disorders. For example, aggression associated with sleep problems, excessive motor behavior, hypersexuality, and irritability may suggest the presence of mania. Thus, a psychiatrist may be inclined to diagnose a person with a mood disorder (e.g., bipolar disorder). Conversely, aggression in the context of environmental stressors, hyperventilation, and agitation may suggest the presence of an anxiety disorder. Both clusters of symptoms require different types of intervention.

Psychiatric symptoms such as delusions, hallucinations, irritability, mood lability, or a loss of interest in previously pleasurable experiences are directly associated with MI. Other factors a psychiatrist takes into consideration may include sleep habits, how a person typically interacts with people in their environment, any recent disturbances in the person’s life (e.g., recent move to a new home, staff turnover), and/or medical complications contributing to mental health. However, problem behavior is not always a symptom of MI. When problem behavior is a symptom of MI, its severity and frequency may suggest a more chronic psychiatric problem. Nonetheless, problem behavior can be associated with disruptions in the environment that can be alleviated to reduce its prevalence. We will use a case example to illustrate how problem behavior can be indicative of MI and of different behavioral functions. Where appropriate,

pseudo names have been used to protect the identity of the individuals described throughout this manual.

Case Example #1:

> Christie was a 21-year-old woman diagnosed with major depressive disorder, impulse control disorder, and mild mental retardation. Behaviorally, she engaged in self-injurious behavior (i.e., cutting herself) and physical aggression (i.e, physically assaulting staff). She frequently blamed others for her actions, and wanted attention immediately upon request. If others did not stop what they were doing to pay attention to her, her behavior escalated over about a 1 hour period. Thus, the intensity of aggression was a major concern. She apologized for aggressive behavior, but staff did not feel this was sincere. There were reported suicidal ideations in the past, but no plan was noted. Although she did not exhibit psychotic behavior during her interview, Christie told fabricated stories. One of these stories consisted of her wearing a provocative outfit to a club, getting raped and going to a hospital (she allegedly reported this while being a patient at a mental health center). She also reported that her conservator made her sleep with the conservator's boyfriend, which the conservator denied. Christie said she sleeps well most nights of the week. She said her energy was "not that much" and her answer to how well she concentrates was: "Don't know." She reported auditory hallucinations at 14-year-old, stating "thought people talk about me bad." No auditory hallucinations were noted since then. Cognitively, she was fully oriented to where she lives and to the day, date, month, year, and season. She was able to remember 2 out of 3 words after a few minutes, and could spell the work "cat" backwards. Christie demonstrated poor insight and judgment about her behavior. Her thought process appeared linear, logical and goal directed.

Christie was diagnosed with major depression because of her irritability, recurrent thoughts of suicide, and poor self-image. Other symptoms she displayed included blaming others for angry outbursts and expressing exaggerated frustration over minor matters. Impulse control disorder entailed failing to resist an impulse to engage in behavior that physically harms the person or others. For Christie, this emerged as self-injurious behavior and aggression. However, problem behavior alone was not enough to diagnose Christie with depression and impulse control disorder. Because attention was reinforcing for Christie, it was evident aggression and self-injury were instrumental for gaining attention from care providers. Thus, problem behavior served a social positive function (i.e., engaging in problem behavior produced attention). Nonetheless, recurrent irritability and social conflict with care providers associated with depression can be a precipitating factor in the emergence of

problem behavior. That is, the absence of attention when Christie was irritable provoked problem behavior. Instead of using more appropriate social means of acquiring attention (e.g., asking to talk), Christie engaged in problem behavior with significant intensity. Thus, the impulsiveness of her behavior was symptomatic of impulse control disorder.

The case example presented here demonstrates how MI and environmental functions interact with problem behavior. Furthermore, it demonstrates how symptoms of MI can occur with and without problem behavior as an associated feature. However, problem behavior and/or MI may also be associated with an underlying medical condition that has not been properly diagnosed (APA, 2000). For example, pain is a common reason for problem behavior in people with limited communication skills (Carr & Owen-Deschryver, 2007). In these cases, an appropriate medical assessment is necessary to rule out medical causes for problem behavior. In the following section, we will discuss the influence of underlying medical conditions on problem behavior displayed by people with dual diagnoses.

Health Conditions and Problem Behavior

Health conditions are defined as any illness, injury, impairment, or physical condition that negatively impacts a person's well-being (World Health Organization, 2000). Although health conditions can be manifested in a variety of forms, research during the last decade indicates that there are certain conditions that are particularly prevalent among individuals with MR. Common health conditions in this population include allergies, constipation, dysmenorrhea, gastroesophageal reflux disease (GERD), otitis media, and sleep problems. This increased prevalence may be due to genetic syndromes, physical complications that result from the disability, and/or side-effects produced by polypharmacy (i.e., taking multiple psychotropic medications).

A number of experiments have shown how problem behavior is increased by the presence of a particular health condition. For example, O'Reilly (1997) showed that otitis media (a painful inner-ear infection) can increase rates of SIB. Similar experiments have been conducted for allergies, constipation, dysmenorrhea, GERD, and sleep problems showing a relation between problem behavior and health conditions (Bohmer et al., 1999; Horner, Day, & Day, 1997; Kaminer, Feinstein, Barrett, Tylenda, & Hole, 1988; Kennedy & Meyer, 1996; O'Reilly, 1995; Uphold & Graham, 2003).

Gastrointestinal (GI) disorders can involve any part of the digestive tract from the esophagus to rectum. GERD is a painful condition involving stomach contents washing back into the esophagus. The influence of GERD in relation to problem behavior is primarily related to the physical discomfort produced by this GI disorder. For example, occurrences of SIB may increase following meals at

7:00am, 11:00am, and 4:00pm, with decreases in SIB occurring approximately 2 hr after meal time.

Constipation is the retention of stool in the large intestine that can also result in substantial discomfort. Similar to GERD, constipation can interact with behavior problem. The most direct effect of constipation is to produce abdominal discomfort. Several studies have noted a correlation between constipation and increases in problem behavior (Carr & Smith, 1995; Janowsky , Kraus, Barnhill, Elamir, & Davis, 2003; Kozma & Mason, 2003).

Allergies refer to a range of physiological reactions to the introduction of some foreign element into or on the body. Types of allergies can include ingestion allergies, inhalant allergies, and contact allergies. Ingestion allergies are caused by a person having an atypical reaction to the ingestion of some type of solid or liquid substance. Inhalant allergies can include seasonal allergies (e.g., tree or grass pollen) and indoor allergies (e.g., animal or mold reactions). Contact allergies involve an unusual reaction to substances that are introduced onto (e.g., cosmetics) or into the skin (e.g., bee sting). Allergies are commonly seen in the skin and the upper and lower respiratory tract with local or systemic reactions. Common local reactions can include pain and inflammation.

Dysmenorrhea and premenstrual syndrome (PMS) are two distinct health conditions that can occur in women relating to their menstrual cycle. Dysmenorrhea is pain that occurs in the lower abdomen/pelvis around the time of menses (Collins Sharp, Taylor, Thomas, Killeen, & Dawood, 2002). In cases of problem behavior being associated with dysmenorrhea, the occurrence of behaviors is cyclical and coincides with the onset of menses (Quint, Elkins, Sorg, & Kope, 1999). PMS is a recurrent, cyclical symptom complex presenting as irritability, depression, crying spells, mood swings, sleep disturbances, and changes in appetite or libido (Uphold & Graham, 2003). PMS symptoms usually occur prior to the onset of menses and resolve shortly following the onset of menstrual bleeding (Yonkers, 2004).

In general, health conditions may exacerbate some aspect of behavior-consequence relations shaping and maintaining problem behavior. In some instances, the influence of health conditions may be evocative or discriminative, in other instances health conditions may create new behavior-consequence relations. An example of the former type of process would be the discomfort associated with dysmenorrhea, making consequences that are typically ineffectual as negative reinforcers unpleasant enough to evoke escape-related behavior. An example of the latter process would be the onset of otitis media, whose painful somatosensory effects can be temporarily alleviated by head hitting or head banging. In both examples biological variables serve a role in changing how behaviors are negatively reinforced.

Conclusions

A clear implication stemming from this review of environmental, psychiatric, and medical influences on problem behavior is the need to conduct interdisciplinary functional analyses including health professionals as members. Early in the development of the functional analysis process, health and MI conditions should be included as part of the initial assessment. However, the individuals conducting functional analyses typically have expertise in behavior analysis. Behavior analysts are not trained with the content expertise necessary to competently assess psychiatric and/or health conditions. Therefore, one service-delivery recommendation we can make from our review is that a behavior analyst, psychiatrist, and physician (or nurse-practitioner) be members of an interdisciplinary team conducting functional analyses. These individuals are qualified to identify and diagnose environmental, MI, and health conditions that can address the possible influences these conditions may have on problem behavior.

A second implication for service-delivery technologies is that when MI and health conditions are implicated through assessment as contributing to problem behavior, it may be necessary to ascertain more directly the role of the MI and health conditions prior to developing function-based interventions. That is, it may be desirable to develop an intervention for the health condition prior to implementing antecedent and consequence-based procedures. This would allow the role served by the health condition(s) to be more clearly elucidated prior to the implementation of a more comprehensive intervention. Two possible benefits may result from this tactic. First, a clearer understanding of how health conditions contribute to problem behaviors will be revealed by isolating their effects on behavior. Second, behavioral issues may resolve following the treatment of the health condition.

A third implication for service-delivery technologies is that a functional assessment of the environmental consequences for problem behavior may help psychiatrists accurately treat symptoms of MI. Behavior support plans based on the function of problem behavior can minimize its occurrence, decreasing the need for psychotropic medication . For example, aggression may be maintained by social reinforcement that functions to get attention from others. A behavior support plan could be written to help staff provide attention for an alternative response instead of aggression. However, if aggression is maintained by nonsocial reinforcement, it may be related to the MI diagnosis. In this case, an appropriate psychotropic medication may be prescribed by a psychiatrist. However, it is still important to monitor the behavioral and medical side effects of using medication.

Most often, interactions between environmental, psychiatric, and health conditions contribute to problem behavior. Health professionals and behavior analysts can prepare better interventions that improve the quality of life for people with dual diagnoses when working in a collaborative model. The remainder of this manual presents a care coordination model for developing

comprehensive treatment plans. In chapter 4, we will discuss the various roles of community care providers in developing a care coordination model.

IV. Defining Roles and Responsibilities within Care Coordination

Clinicians and careproviders have two key objectives: Improve the quality of life for people with dual diagnoses living in the community, and prevent readmission to an institutional setting. People with dual diagnoses are best served when services are centered on the person. We need to also focus on the training needs of those people working closely with the service recipient on a daily basis. Service providers offer an array of specialized assistance aimed at accomplishing the above mentioned objectives. This chapter provides an overview of the various members of a treatment team and their obligations for providing effective services to the consumer.

In Tennessee, service providers are members of a planning team. The planning team is intended to support people with dual diagnoses and their families in planning the delivery of services. Table 1 provides a general framework of the functions of the planning team. Planning meetings are intended to foster the exchange of ideas and concerns regarding service delivery, or lack thereof. The network of providers works cohesively only when the members of the network share knowledge about the roles each member plays in the planning team. Thus, people with dual diagnoses benefit from collaborative efforts designed to improve comprehensive service delivery and accountability. All of the responsibilities outlined in this chapter are consistent with current treatment policy outlined in the provider manual of the Tennessee Department of Mental Retardation Services (DMRS). Others are suggestions based on information gathered from the CIP. For more specific details, service providers should consult the Planning and Implementation Resource Manual (2006) located on the DMRS website.

Table 1. The Functions of the Planning Team

1) Encourage autonomy of the consumer.
2) Encourage the consumer to participate in treatment planning.
3) Help the consumer understand consequences for decisions.
4) Help identify strategies for achieving the consumer's desires.
5) Identify options to help the consumer achieve goals.
6) Provide sufficient information about providers to ensure a match between the consumer and the provider of services.
7) Identify barriers to successful achievement of goals established by the consumer and help alleviate those barriers.
8) Provide recognition when the consumer accomplishes a goal.

Service Recipient

A person in the planning team whose role is sometimes underemphasized in care coordination is the person receiving services. Although people with dual diagnoses typically are not accountable for day-to-day service provision, their basic human and civil rights play a role in how those services are provided. There are important rights each service recipient should be encouraged to use as much as possible. First, each person has the right to make choices about employment, activities, lifestyles, and education within his/her capacity to do so. Second, each person has the right to consent to treatment until they are legally incapable of doing so. Third, each person has the right to inform appropriate authorities of mistreatment, abuse, or neglect.

The role of the planning team is to accommodate the rights of the person with dual diagnoses in order to achieve his/her goals. Many people with dual diagnoses can communicate their needs and desires. Others may have a more difficult time expressing what he/she needs and desires. Thus, the planning team must make all attempts to insure the highest level of autonomy possible for the person they serve.

There is a balance between providing effective treatment and insuring personal autonomy. For example, a person who is highly aggressive may need more restrictive behavioral interventions, such as limited community participation. The person may not agree with a treatment decision in this case, but the planning team also has an obligation to protect others from harm. Conversely, the person may only be aggressive with a care provider with whom there is a negative relationship. In this case, it would be inappropriate to dismiss the person's need for appropriate relationships by denying community involvement. Therefore, the planning team has many members who work together to avoid unnecessary infringement upon the rights of the person with dual diagnoses.

Family Members and Conservators

Another member of the planning team who is sometimes underemphasized is the family, conservators, or other members in a circle of support (COS) of the person with dual diagnoses. Generally, families and conservators have similar roles when it comes to making decisions for people with dual diagnoses. Any family member can have valid input to treatment decisions and should be allowed to participate in the decision-making process. However, the immediate family and/or legal conservator should be an integral part of the planning team.

Decision making is the primary responsibility of a conservator, whether the conservator is a family member or is court-appointed. Typically, conservatorship includes the right to consent to treatment. At times, conservatorship may include

decision making for financial matters. Table 2 provides an extensive list of the roles and responsibilities of the conservator.

Table 2. The Roles and Responsibilities of the Conservator

1) Protect personal and financial interests.
2) Foster growth and independence.
3) Defend/protect personal rights.
4) Provide pertinent information to the person about plans of care.
5) Make health-related decisions or granting consent for treatment, services and supports.
6) Advocate for the most appropriate and least restrictive form of care.
7) Seek professional evaluation for treatment recommendations.
8) Work cooperatively and collaboratively with the planning team.
9) Advocate for changes in service delivery as needed and in the best interest of the person.
10) Consent for day habilitation therapies and what habilitation programs to use.

Being a conservator requires the ability to make decisions in the best interest of the service recipient. The conservator must be knowledgeable of the person's social, medical, legal and financial records in order to make decisions. An informed conservator can provide valuable knowledge to the planning team and make decisions based on a working relationship with careproviders. Thus, the conservator must be knowledgeable about his/her own abilities and limitations, as well as the roles and responsibilities of the other members in the planning team.

Working with the conservators is integral to the provision of high quality plans of care. Professionals should recognize that the relationship a conservator has with a person with dual diagnoses is different than the relationships professionals have with those individuals. The former has a lifetime commitment for the well-being of their loved one. The latter is typically involved for only a short period of time. Furthermore, parents and conservators usually share a personal relationship, as opposed to a professional relationship. Thus, professionals need to be aware of the role the family and others as care providers fulfill in the treatment process and the planning team.

Independent Support Coordinator

Independent support coordination ensures that planning and coordination of services is focused on the person with dual diagnoses. Support coordination involves determining what services are needed, developing a support plan, identifying the services that will be provided, and monitoring to ensure that

services are provided according to the support plan. The independent support coordinator (ISC) is responsible for coordinating services. The responsibilities of an ISC working with people who have dual diagnoses are similar to an ISC working with people with development disabilities receiving services through DMRS (see Table 3). Generally speaking, the ISC is the most critical provider for insuring efficient service provision.

Table 3. The Roles and Responsibilities of the Independent Support Coordinator

1) Initiate and assist in assessing the consumer's strengths, weaknesses, needs, preferences, and goals.
2) Develop outcomes and support goals using assessment information from all members of the planning team.
3) Develop individual support plans and monitor implementation.
4) Identify and secure appropriate services based on assessments, including:
   a) completion of service authorization requests
   b) assistance with appeals when services are denied
   c) monitoring to ensure that problems are resolved so that the ISP can be implemented accurately.
5) Encourage all necessary planning team members to participate in planning.
6) Facilitate planning meetings efficiently.
7) Help select service providers by:
   a) assisting to collect information available from the providers
   b) assisting to collect information regarding licensure or certification
   c) arranging for meetings with provider management staff
8) Address the consumer's risk factors, health, behavioral, and mental health concerns.
9) Identify barriers and strategies for overcoming risks.
10) Visit with the consumer monthly.
11) Provide information and education to the consumer and conservator about:
   a) types of services and programs available
   b) rights and responsibilities of the consumer
   c) conflict resolution processes
12) Ensure consumer's service requests are affordable.
13) Conduct monthly reviews of support plan provision.

ISC's facilitate planning meetings for people with dual diagnoses. Planning meetings under the DMRS guidelines require at least one meeting per year to address issues relevant to a person's supports. These meetings provide an opportunity to assess the consumer's needs and accomplishments, develop appropriate support strategies, select services and providers, monitor current progress toward support goals, and/or resolve any interpersonal conflicts that impede support provision.

However, people with dual diagnoses often encounter challenges that need to be addressed more often than people who do not have dual diagnoses. Because problem behavior with this population is typically more volatile and potentially dangerous, planning meetings should occur more regularly than once per year. The CIP encountered many situations that required monthly planning meetings to ensure service providers provided consistent care aimed at accomplishing the goals outlined in the consumer's support plan. Thus, routine monthly meetings systematically address any barriers to treatment.

Communication with the planning team is critical to ensure problems that emerge can be addressed quickly and efficiently, whether through monthly planning meetings or simply disseminating information about the status of the consumer. All members should be informed of the meeting time and date, and all members should make every effort to be represented at the meeting. The consumer should be included in the meetings unless there is a valid reason for exclusion. Typically, the only reasons a person may not participate in a meeting is that he/she has requested to be absent, or if the mental health of the person makes such meetings unproductive. Case Example #1 first presented in chapter 3 provides a great example for meeting without the person attending.

Recall that "Christie" was a 21-year-old woman diagnosed with major depressive disorder, impulse control disorder, and mild mental retardation. Behaviorally, she engaged in self-injurious behavior (i.e., cutting herself) and physical aggression (i.e., physically assaulting staff). She frequently blamed others for her actions and wanted attention immediately upon request. If others did not stop what they were doing to pay attention to her, her behavior escalated over about a 1 hour period. Christie also did not like to be confronted about her behavior. Early in her involvement in the CIP, she began telling different versions of problems she was experiencing to different members of the planning team. She would request information from a service provider, and then use that information to create arguments with other members of the planning team. The team began meeting monthly with Christie initially to praise her for accomplishing goals she established for herself. However, when it was time to address her problem behavior, she would get extremely agitated and begin threatening physical harm to members of the planning team. Rather than create an opportunity to inflict harm on others, the planning team began meeting 30 minutes prior to Christie's arrival.

The time before her arrival allowed the team to discuss problem behaviors that were occurring so the team could agree on the appropriate interventions to prevent the behaviors from occurring in the future. When Christie arrived, the behavior analyst explained the concerns of the planning team and provided her with an opportunity to explain her view of the problem. The behavior analyst then used negotiation strategies to help Christie and the planning team reach an agreement of how to resolve the conflict without infringing upon Christie's rights.

The process of planning is intended to be a collaborative process, which will frequently require negotiation and consideration of different alternatives for meeting a consumer's needs. Members of the planning team are intended to interact and dialog, with the end result being to determine the best possible way to deliver needed supports. By including the consumer in planning decisions, it enhances the consumer's sense of autonomy and alleviates many problems that can emerge when service providers dictate treatment rather than encourage participation by all members. The consumer and his/her conservator always have the legal right to make the final determination as to what services are needed. It is the ISC's responsibility to convey the wishes of the consumer and conservator to the rest of the planning team, and to convey the risks and benefits to the consumer about the recommendations made by those members.

Residential and Day Habilitation Providers

One of the most challenging services to provide for people with dual diagnoses is residential supports. Not only does the residential agency have a limited history with the person they agree to provide services for, they are also pressed to find staff with extensive skills for dealing with this population. A rapport has not yet been established between the residential provider and the consumer, making initial interactions difficult in some cases. Similarly, there is little training available for how to interact with or manage people with dual diagnoses. Nonetheless, residential providers are responsible for the day-to-day well being of the consumer.

As with all service providers, residential agencies have the task of determining whether they can meet the needs of the person coming to their care. They are responsible for enabling a consumer to acquire and enhance skills necessary to reside in a community-based setting. Generally, the residential service includes direct assistance with activities of daily living (e.g., bathing, personal hygiene, or meal preparation), household chores, budget management, attending appointments, and building interpersonal and social skills. Furthermore, they must insure staffing is adequate for the level of need for the person they serve. Table 4 displays the roles and responsibilities of the residential service provider.

Within a care coordination model of dual diagnoses, it is essential that residential providers communicate with the ISC and planning team. Many of the people with dual diagnoses have intensive treatment plans that require weekly visits from therapists in order to minimize physical, psychiatric, and behavioral challenges presented by this population. Thus, it is imperative that appointments are kept by the residential provider. It may be beneficial for residential providers to appoint a liaison (or staff supervisor) within the agency to keep daily schedules of their consumers.

Having one person within the agency who is accountable for keeping the schedule insures that the consumer has the opportunity to manage transitions between daily activities and promotes a structured environment. Adherence to daily schedules also prevents miscommunication about appointment dates and times. When other service providers want to schedule visits, it is more efficient to have a contact person that can manage the daily schedule. Furthermore, if changes in the schedule must occur, communication with the service providers can occur in a timely manner to avoid missed appointments. It is professionally appropriate to provide 24 hours notice of appointment cancellations when attendance is unlikely.

Finally, any problem behaviors that may arise from specific activities can be quickly identified if the schedule is kept by a residential provider. For example, if the person has too many activities planned or does not like a particular activity, service providers can quickly determine the onset of a problem behavior with the onset (or offset) of a daily activity. When a person does not know what to expect during the day, problem behavior often emerges. If the daily schedule is not kept, it may be more difficult to identify events that lead to problem behavior. This may emerge as behavior that is described by staff as occurring for “no apparent reason,” when asked by a behavior analyst or psychiatrist. The more succinct the schedule, the easier it is for staff to identify the events that lead to problem behavior. Appropriate supports can then be developed to assist the careproviders and consumer during the times the problem behavior is more likely to occur. Schedules will vary depending on the person’s abilities and desires, but an example of how a schedule can be used to provide structure for daily routines and activities is provided below.

Time Start	Time End	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:30	7:00	wake up	wake up	wake up	wake up	wake up	wake up	wake up
7:00	7:30	eat breakfast	eat breakfast	eat breakfast	eat breakfast	eat breakfast	eat breakfast	eat breakfast
7:30	8:00							
8:00	8:30	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth
8:30	9:00	shower and dress	shower and dress	shower and dress	shower and dress	shower and dress	shower and dress	shower and dress
9:00	9:30	take meds	take meds	take meds	take meds	take meds	take meds	take meds
9:30	10:00	community outing	therapy appointment	work	community outing	Work	community outing	community outing
10:00	10:30	or			or		or	or
10:30	11:00	preferred home	community outing		preferred home		preferred home	preferred home
11:00	11:30	activity			activity		activity	activity
11:30	12:00	take meds	take meds	take meds	take meds	take meds	take meds	take meds
12:00	12:30	lunch preparation		lunch preparation	lunch preparation	lunch preparation	lunch preparation	lunch preparation
12:30	1:00	eat lunch	lunch preparation	eat lunch	eat lunch	eat lunch	eat lunch	eat lunch
1:00	1:30		eat lunch				community outing	community outing
1:30	2:00	therapy appointment		rest	therapy appointment	rest	or	or
2:00	2:30	rest			rest		preferred home	preferred home
2:30	3:00	preferred home	preferred home	planning meeting	preferred home	preferred home	activity	activity
3:00	3:30	activity	activity		activity	activity	community outing	community outing
3:30	4:00	community outing			community outing	community outing	or	or
4:00	4:30		preferred home	preferred home			preferred home	preferred home
4:30	5:00		activity	activity			activity	activity
5:00	5:30	dinner preparation	dinner preparation	dinner preparation	dinner preparation	dinner preparation	dinner preparation	dinner preparation
5:30	6:00	eat dinner	eat dinner	eat dinner	eat dinner	eat dinner	eat dinner	eat dinner
6:00	6:30							
6:30	7:00	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth	brush teeth
7:00	7:30	take meds	take meds	take meds	take meds	take meds	take meds	take meds
7:30	8:00	preferred home activity	preferred home activity	preferred home activity	preferred home activity	preferred home activity	preferred home activity	preferred home activity
8:00	8:30							
8:30	9:00	prepare for bed	prepare for bed	prepare for bed	prepare for bed	prepare for bed	prepare for bed	prepare for bed
9:00	9:30	go to bed	go to bed	go to bed	go to bed	go to bed	go to bed	go to bed

Day Service Providers. A goal of providing supports to people with dual diagnoses is to provide the opportunity for daily activities that promote autonomy. One of the primary reasons problem behaviors emerge with this population is that day services are often not tailored to the skill level of the consumer. Problem behavior can emerge if the person is not frequently engaged in activity, or when the person is engaged in activity too frequently. Therefore, a day service that does not provide appropriate activities may precipitate problem behavior.

Table 4. The Roles and Responsibilities of the Residential Provider

1) Ensure the health, safety, and well-being of the consumer.
2) Enable a consumer to develop skills for community living.
3) Provide assistance with daily life skills.
4) Identify and maintain a safe and healthy living environment.
5) Assist the consumer in developing money skills (e.g., budgeting).
6) Ensure adequate transportation.
7) Ensure attendance at appointments and meetings with the consumer, including timely cancellations if necessary.
8) Assist the consumer in developing social skills.
9) Provide emergency staffing as necessary.
10) Provide responsive management to staffing problems, consumer needs, and clinical recommendations.
11) Ensure strict adherence to the individual support plan.
12) Monitor staff performance of support plan goals and clinical recommendations.
13) Ensure staffing is adequate and in compliance with licensure regulations.
14) Obtain appropriate clinical orders that aide consumer health.
15) Provide medication management, including filling prescriptions from psychiatrists and/or PCP's.
16) Maintain communication with the ISC for assistance and/or updates on consumer progress.
17) Assistance in maintaining personal funds of the consumer.
18) Maintain vital records in the home.
19) Create and maintain a daily, weekly, and monthly schedule of activities.

The first option for people with dual diagnosis should be to assess their behavioral repertoire for employment. Table 5 provides questions to consider about the consumer and an employment opportunity to ensure the best possible chances for success. Each year during the support plan update process (or during transition meetings), the consumer and other members of the planning team should discuss the appropriateness of current day services and whether or not the consumer would benefit from employment. If deemed appropriate, a vocational assessment should be completed and submitted to the ISC.

Discussion about the possibility of employment is beneficial for many reasons. First, employment provides an opportunity for the consumer to acquire personal funds to spend on activities and/or items he enjoys. Second, financial obligations of the residential provider are often constrained, which does not allow the provider to provide adequate resources for day programs sustaining a meaningful existence. Third, employment promotes socialization of people with dual diagnoses. Opportunities to interact with members of the community provide examples of appropriate ways to develop positive relationships. Another case example from the CIP illustrates how employment, or lack thereof, can affect problem behavior.

Case Example #2:

> Melanie was a 32-year-old woman diagnosed with mild mental retardation secondary to Post-traumatic Stress Disorder and Major Depressive Disorder, Recurrent. She has a history of hitting, punching, and/or using objects to attack others. Melanie was moved from a chronic psychiatric placement in January 2004 to a community placement. She thrived in her community placement and obtained employment for a brief period of time. She was dismissed from her job due to problems with falling asleep caused by a seizure medication. Behavioral treatment strategies included problem solving, a calendar for her menstrual cycle (menses often precipitated bouts of aggression), a token economy, and non-contingent attention. This was effective in decreasing aggressive behavior for a short period of time. This was due, in part, to the fact that the residential provider had limited resources to back up the token economy with meaningful activities. Melanie began stealing money from staff, stealing items from stores, ordering food and refusing to pay for it, and encouraging a peer to move into the home to save money, despite the fact she did not typically share space with others very well. In essence, problem solving continued to work, despite her inability to follow-through with solutions. For example, when she wanted a roommate, it was because she wanted to save money by sharing costs. Sharing costs meant Melanie had extra money to do the things she enjoyed. For several months, the planning team struggled with what to do about Melanie's behavior. All of the challenges faced by the team involved money. Since there was no funding, Melanie spent many hours at home with nothing to do. From the residential perspective, Melanie was incapable of working because of her emerging problem behaviors. They did not feel she would maintain employment if hired. From the behavior analyst's perspective, the problem behaviors emerging were a means of acquiring money to do the things she enjoys. Thus, the recommendation was to secure employment after the psychiatrist for the CIP reduced the medication that precipitated

fatigue and sleepiness. It took many months to find employment because of her history of violence. However, once an employment opportunity arose, Melanie began working toward earning money. She began participating in activities she enjoyed and her problem behavior ceased. She reported being much happier about her employment opportunity.

This case study provides a great example of how a coordinated care model can promote autonomy while decreasing problem behavior. First, the consumer was going to obtain money for participating in preferred activities. She would have done this either through deviant behavior (e.g., stealing), or by socially appropriate behavior (e.g., employment). However, because of her medication history, she was unable to stay awake at work. Thus, the psychiatrist reduced her seizure medication to reduce sleepiness. Once she was capable of staying awake, and she was motivated to obtain money for items she enjoyed, the employment specialist for the residential provider found an employer willing to work with the consumer.

Table 5. Questions to Consider When Identifying an Employment Match

1) What are the consumer's likes, dislikes, and ambitions about work?
2) Are there any physical or cognitive barriers affecting the consumer's ability to perform job duties specific for the job?
3) How many hours of work are required by the place of employment?
4) Are there any barriers to working the number of hours required by the employer?
5) Are there any problem behaviors that may prevent working in a crowded area?
6) Are there any historical legal or behavioral barriers preventing the consumer from working with a specific population?
7) Can the consumer handle performance feedback?
8) Will the consumer walk off the job if he cannot cope with an aversive event?
9) Can the consumer attend work regularly or are there any programmatic conflicts preventing employment at designated times?
10) Are there any transportation issues that will impede timely arrival or departure from work?
11) Are there any medications that may impede performance? Will medication administration at work be problematic?
12) What level of supervision is needed, and is there qualified staff to supervise?
13) Does the consumer like the job?
14) Does the consumer need frequent rewards for engaging in work activities?

There are occasions when employment-based day services are not an option. For example, the consumer may have a mental health, behavioral, or medical problem preventing community-based employment. In these cases, day services may be provided in the home or in the community. Community-based and facility-based day services enable the consumer to participate in meaningful activities with members of his/her community. Day services may facilitate job exploration activities, education, or leisure activities. The services must be individualized to maximize the opportunity for a meaningful experience and reduce problem behavior. It is more appropriate to integrate natural supports from the community in order to improve or enhance positive relationships with community members.

Most of the responsibilities of the day service provider are similar to those outlined in Table 4. For example, it is important to maintain a safe and healthy environment in which to learn and grow. As with residential providers, day service providers will be more successful if a monthly schedule of activities is maintained for the purpose of communicating with various other planning team members. Maintaining a schedule also reduces the possibility of problem behavior emerging related to poorly coordinated routines and activities. For example, a person experiencing difficulty adjusting to poor transitions from one activity to the next will be much more likely to adapt to a schedule that is maintained by the day service provider.

In summary, residential and day service providers have an obligation to ensure the well-being of the consumer. This includes cooperating with the various members of the planning team by working toward goals established in planning meetings. It is necessary to remove any barriers that prevent daily routines from being accomplished efficiently. It is equally important to ensure all of the services outlined in the individual support plan are implemented as accurately as possible by working to keep appointments and providing any documentation that may facilitate effective treatment decisions. Besides the ISC, who coordinates and ensures proper implementation of services for the consumer, the residential and day service providers are the most important members of the planning team in the daily life of people with dual diagnoses. They provide a daily opportunity to foster healthy relationships. Because of the constant interaction with the consumer, these providers must be well-prepared to provide supports. When all of the responsibilities of the residential and day service providers have been met, other members of the planning team provide technical support to address any problems that arise due to physical, medical, mental health, or behavioral problems.

Primary Care Providers

There are numerous health conditions that affect people with dual diagnoses, both acute and chronic, that require ongoing assessment and intervention. Problem behavior may arise from these conditions, and must be

addressed in a timely manner. Primary care providers (PCP) include family practice physicians, nurse practitioners, physician assistants, and pediatricians. PCPs are responsible for diagnosing and treating acute and chronic illnesses, promoting healthful living, preventing disease, health maintenance, and patient education. Additionally, PCPs refer patients to specialty services and agencies when appropriate and continue to monitor the patient's progress.

Coordinating primary care services in the community can enhance the lives of persons with dual diagnoses. Increasing numbers of persons with mental retardation are living into adulthood, and PCPs are needed to direct the medical support necessary for successful community integration. While most visits to health care providers may be for episodic illnesses, routine periodic health screening should be an important component of the health care plan. The PCP will look for physiological and/or behavioral responsiveness to environmental stimuli, which will help diagnose medical problems. A physical examination form is completed by the PCP for the consumer's records.

Within a care coordination model, records of PCP appointments should be made available to psychiatrist and behavior analysts. Problem behavior may be misdiagnosed as psychiatric symptoms or problem behavior (i.e., diagnostic overshadowing) if medical symptoms are not identified or treated. Furthermore, the PCP is instrumental in monitoring physical health conditions attributed to psychotropic medication use. For example, some neuroleptic medications can precipitate diabetes. If this occurs, the PCP may need to prescribe medications to alleviate or reduce symptoms of the disease. Similarly, by promoting exercise, the PCP can help reduce obesity commonly observed among people who take certain types of psychotropic medication.

Psychiatrist

A psychiatrist is typically consulted to address mental health needs of the consumer. The psychiatrist is responsible for conducting an initial evaluation of the consumer's mental health history and current psychiatric status. Chapter 5 will describe the evaluation process in more detail. During the initial evaluation, the psychiatrist provides a mental health diagnosis and prescribes psychotropic medication specifically targeting symptoms of the disorder (if needed). The medications should only be prescribed at a minimum therapeutic dosage to alleviate side effects of psychotropic medication.

When a psychiatrist changes medication, appointments should be scheduled within 2 weeks to monitor any therapeutic or counter-therapeutic effects of the medication. The psychiatrist will make decisions about the current effectiveness of the medication based on a staff and consumer interview. Once a therapeutic dosage of medication has been achieved, appointments can occur at longer intervals. However, it is often important to re-evaluate the consumer's mental health status every one to three months. Once per year, a psychiatrist

should review the outcome of psychotropic medication and attempt reducing or discontinuing medication. This reduces overuse of medication for symptoms that are either no longer present, or that are masked by other health or behavioral issues.

Behavior Analyst

Problem behavior may be related to health problems (e.g., toothaches, abdominal pain, constipation, etc.), environmental situations, or be a sign of mental illness. However, since many people with DD use behavior as a form of communication, it is often necessary to rule out environmental causes for behavior. A behavior analyst may be called upon to complete a functional behavior assessment to determine why a person engages in problem behavior. Behavioral assessment may include evaluation of past behavioral history and environmental/situational factors that could be causing the problem behavior. Once an assessment is completed, a behavior support and crisis plan may be developed to help the consumer obtain or escape environmental stimulation by more socially acceptable means. The plan may be modified as needed to meet the treatment goals of the consumer. The behavior analyst is also responsible for training the supervisor of direct support staff to carry out the behavior plan. Feedback is provided to implementers of a behavior plan based on accurate and inaccurate execution of procedures outlined in the plan. Assistance may be provided on-site to ensure the plan adequately addresses the needs of the consumer, and that the careproviders have the training and/or materials necessary to carry out the behavior support plan.

An additional role of the behavior analyst identified while developing a care coordination model is frequent contact with the residential provider and ISC. This can take place during monthly planning meetings organized by the ISC. Meeting monthly provides an opportunity to problem solve with the planning team about what works well and what does not. Adjustments can be made to a behavior support plan according to the information obtained from monthly meetings. Additionally, the meeting provides an opportunity for the behavior analyst to instruct, train, or educate members of the team about basic principles of behavior that may play a role in treatment integrity.

The role of the behavior analyst is one of consultation. Although a behavior analyst is trained to identify causes of problem behavior and offer technical support and training, it is the residential provider that interacts with the consumer on a daily basis. Thus, it is the responsibility of the residential provider to properly implement a behavior support plan and to demonstrate its effectiveness. If a plan is implemented according to the procedures as written and trained, the behavior analyst can re-evaluate the accuracy of the procedures and/or function of behavior. However, if a plan is not implemented correctly, it is impossible to determine the adequacy of treatment procedures.

Therapy Services

Therapy services can be a crucial component in assisting with the development and/or maintenance of skills needed to achieve outcomes identified in the support plan. Physical therapists, occupational therapists, speech and language pathologists, and nutritionists are among the most common therapy services for people with dual diagnoses. The primary purposes for providing therapy assessment and treatment services include facilitating achievement of ISP action steps and outcomes, increasing or maintaining skills to allow independent functioning, preventing deterioration of skills or physical condition and maintaining optimal health and safety. Table 6 shows the roles and responsibilities of therapists.

Therapy services in the State of Tennessee currently must be approved after an initial assessment of need. The first step toward providing services is to obtain a Physician's order, specifying the amount, frequency and duration of the service to be provided. Therapists may provide services independently of any other service provider. However, there may be times when it is important for a therapy provider to consult with the behavior analyst or other service providers. For example, a physical therapist may have difficulty getting a person to tolerate physical stretches that are necessary to maintain the ability to bare weight on his/her leg. The person becomes physically aggressive when the physical therapist arrives. The behavior analyst may be able to identify some aspect of the environment that causes the person to avoid engaging in physical activity. The therapist and behavior analyst can then develop a reinforcement program to maximize performance while reducing problem behavior.

Another example of when it may be necessary for a therapist to consult with a behavior analyst is illustrated by Case Example #1. Christie was taking a commonly prescribed antipsychotic medication for her explosive problem behavior. However, one of the drawbacks for the medication was that it is often responsible for weight gain. Thus, Christie was obese. A nutrition assessment was requested by her ISC, hoping to provide nutrition counseling and education with the aim of helping Christie lose weight. Although the nutritionist intended to promote healthy eating practices, Christie became irritable about the recommendations. Specifically, Christie was being asked to eat healthier foods and to discontinue eating some of her favorite foods. When her direct careproviders reminded her of the nutrition goals, Christie would become physically aggression. The planning team decided to consult with her behavior

Table 6. Roles and Responsibilities of Therapy Services

1) Complete assessments to determine the need for therapy services.
2) Develop and revise therapy plan of care.
3) Participation in planning meetings to ensure support plan goals are addressed and to identify emerging risk factors.
4) Develop staff instructions in collaboration with residential and day providers.
5) Train direct support staff regarding staff instructions and/or use of therapy equipment.
6) Monitor intervention and staff performance of therapy instructions.
7) Provide hands-on therapy services that may only be provided by a licensed therapy practitioner.
8) Identify equipment or assistive technology needed, and provide ISC with information to obtain equipment.
9) Collaborate with the consumer and his/her conservator, or other entities about
integration of the treatment plan and goals into daily living.
10) Document activities related to the implementation of and progress toward support plan action steps and outcomes.

analyst about how to help her lose weight and keep direct careproviders safe. After speaking with Christie, the behavior analyst decided to use problem solving with the planning team to reduce confrontations about food. The rationale was that Christie was using aggression to remove what she perceived as negative demands about her weight. Additionally, she was getting the food she wanted because direct careproviders were choosing to remove themselves from the situation and giving her the food. In the problem solving session, the planning team decided to help Christie lose weight through a modified Weigh-Watchers® program. This allowed Christie to continue eating foods she liked, but in moderation. Essentially, Christie earned points for eating healthy food so that she could exchange them for food she liked. She made great strides toward accomplishing her nutrition goal using this approach.

In summary, therapy services often have similar responsibilities to the consumer and planning team as a behavior analyst. Because of the severity of problem behavior, sometimes it is necessary for therapy providers to consult with a behavior analyst. This alliance will allow therapists to maximize therapy outcomes and minimize problem behavior related to environmental triggers. However, there are times that a behavioral episode may occur that precipitates more intense services.

Intensive Consultation Team

In April 2004, the Tennessee DMRS developed an Intensive Consultation Team (ICT). The ICT was charged with identifying resources that directly or indirectly serve crisis situations for people with dual diagnoses. Each region in

Tennessee is assigned a psychology director, associate director, and behavior management specialist responsible for developing a response network that prevents problem behaviors from jeopardizing community placement. This includes training service providers about how to manage behavioral and mental health issues.

The ICT model is based on prevention of problem behavior. This includes primary prevention, secondary prevention, and tertiary prevention. Primary prevention includes activities such as establishing an advisory group to inform the ICT about service issues, identify resources to support people in crisis, and tracking incident data related to the consumer and their residential provider agency. The information obtained in the primary prevention phase is used to refine service delivery. Secondary prevention includes direct training for agencies about mental health and behavioral issues as they relate to dual diagnoses. This may entail refinement of a crisis prevention plan aimed at reducing recidivism and unnecessary use of emergency response systems. Tertiary prevention includes consultation with chronic and acute care facilities to foster a support system that reduces the likelihood of recurring crises and recidivism.

Chronic and Acute Care Facilities

Psychiatric hospitals provide care for consumers who meet criteria for institutionalization. The primary goal of these hospitals is to provide crisis stabilization. In the late 1970s, many psychiatric hospitals were required to deinstitutionalize consumers who no longer required chronic mental health care. Chronic care facilities were often a placement of choice for people who needed long-term mental health care. However, hospitals today are required to identify appropriate community placements and treatment. Laws for involuntary commitment to a state mental health institution for long-term treatment are becoming much more stringent in terms of what constitutes a person's incapacity to make decisions. If a person is not posing any threat of harm to themselves or others, they are often released into the care of community providers within 72 hours. Thus, most care facilities are now considered acute care facilities. Acute care facilities stabilize a person by addressing mental health, behavioral, and medical issues before releasing them into the community. Hospitalization requiring tapering of medication may extend beyond 72 hours to insure appropriate care is taken to reduce re-institutionalization and to insure appropriate community supports are in place prior to releasing the consumer.

Mobile Crisis

Before a person can be admitted to an acute care facility, an evaluation must be conducted to determine whether or not the person meets federal and state criteria for hospitalization. In Tennessee, a crisis team, called Mobile Crisis, provides 24 hour emergency services to assess a person's capability of hurting

themselves or others. Services are focused on assessment and resolution of the potential crisis in the community setting. If hospitalization is deemed appropriate, the crisis team determines where the consumer should go. In essence, the mobile crisis screens people for threatening behavior and mental health crisis. If possible, the person is treated in the home. If not, they are institutionalized for a brief period to stabilize the crisis.

Conclusions

This chapter outlined the various roles and responsibilities of professionals responsible for the care of people with dual diagnoses. When the members of a planning team are aware of their responsibilities, there is more accountability for service provision. When the system is working efficiently, it is possible to determine the positive effects services have on the consumer. When the system is not working efficiently, the positive effects may be disrupted. However, when the roles and responsibilities of each member of a planning team are outlined, it is possible to determine where service provision breaks down. In the end, it is up to each member of the planning team to insure the person is getting adequate services and to take steps to alleviate inadequacies in the system.

Now that the basic responsibilities of the planning team are established, it is important to describe how these responsibilities interact in a care coordination model. Chapter 5 describes how behavioral, psychiatric, and medical assessments are conducted to address problem behavior. Once assessments are conducted, the comprehensive assessment and recommendations for treatment are shared with the planning team. How this information is shared is critical, and involves other members of the planning team during meetings.

V. Assessment Within Care Coordination

Chapter 4 outlined the various roles and responsibilities of professionals involved in assisting individuals with dual diagnoses achieve autonomy through skill development and maintenance. The consumer not only benefits from the collaborative efforts of a planning team and COS when they fulfill their responsibilities, but barriers to successful community integration can be quickly identified and managed. However, the type of services, interventions, and community activities provided to persons with dual diagnoses are often determined by the level of behavioral need. Therefore, it is crucial for an appropriate assessment of problem behavior to guide the decision-making process. Chapter 5 is intended to provide a description of how behavioral, psychiatric, and general health evaluations are conducted collaboratively to insure all possible contributing factors for problem behavior are identified and treated.

Coordination of Assessments

There is often considerable overlap in assessment information collected by the behavior analyst, psychiatrist, and PCP. For example, all three professionals are interested in the social development of the consumer. Thus, if all professionals are present during an assessment, the information can be shared without subjecting the consumer to multiple interviews. Fact-finding through record review can be completed in a more expedient fashion when the professionals work together.

In the CIP, assessment began with an “ice-breaking” phase. During this phase, the clinic coordinator provided a description about the assessment process so the consumer and careproviders were aware of what they were about to accomplish. The consumer and careproviders were given an opportunity to share preferences about activities, foods, living arrangements, and personal relationships. The behavior analyst could document information about the types of activities that could be used for scheduled activities to improve the consumer’s quality of life, or be used to enhance a reinforcement strategy aimed at increasing appropriate behavior. The psychiatrist could use the information to determine the functioning level of the person, or to determine if any psychiatric problems interfered with the person’s ability to comprehend questions. The nurse practitioner could document information about nutritional habits and family support system in place to promote positive health choices.

Once the consumer exhausted his/her list of preferences, the nurse practitioner reviewed records for presenting health conditions that should be monitored during treatment. The careproviders were present during the nurse practitioner record review to answer questions. The behavior analyst and psychiatrist interviewed the consumer simultaneously in another room. The purpose of using another room was to provide sufficient privacy for the consumer to discuss behavioral and/or psychiatric problems without interruption. The

behavior analyst and psychiatrist used the same information to develop treatment recommendations, so it was more useful to have both professionals present during one interview. After the nurse practitioner finished the record review, and the behavior analyst and psychiatrist finished the consumer interview, the process was reversed. That is, the careproviders were interviewed by the behavior analyst and psychiatrist while the consumer participated in a physical examination by the nurse practitioner.

The final step in the comprehensive assessment was to provide some information to the consumer and careproviders about the next steps in the treatment process. Specifically, the clinic coordinator described the assessment process again and the purpose for asking questions. Second, the clinic coordinator proposed a timeline for the recommendations based on the assessments to be developed. Once the recommendations were developed, they were shared with the COS. When the consumer exited, the behavior analyst, psychiatrist, and nurse practitioner collaborated about the information they had obtained during each part of the assessment. Any discrepancies in data were noted for future confirmation by either direct assessment or by inquiry through the COS. Specific treatment recommendations were not made during this phase of intervention. Instead, each professional provided a general diagnosis about what issues needed to be addressed to help the consumer thrive in the community with minimal behavioral, psychiatric, or general health problems.

In summary, comprehensive evaluations allow behavior analysts, psychiatrists, and PCPs (or nurse practitioners) to collaborate about the variables that influence problem behavior. There are many benefits to comprehensive assessment. First, better congruity between provider recommendations means improved holistic care. Second, the time a consumer spends in an assessment phase is dramatically reduced by information-sharing across disciplines. Third, problem behavior related to health complications can be ruled out before developing extensive behavioral and/or psychiatric interventions. However, it may be that each treatment component is necessary to reduce problem behavior. Fourth, a holistic plan of care can guide the direction of problem solving among the COS. The next section describes the various methods of functional behavior assessment used by behavior analysts to determine why a person engages in problem behavior.

Functional Behavior Assessment

Functional behavior assessment is a problem-solving strategy for identifying the variables associated with problem behavior. This approach to assessment is important because it leads to conclusions about the underlying motivation of a person to avoid or acquire something. The functions of behavior are not appropriate or inappropriate. Instead, the behavior used to avoid or acquire some environmental consequence is what is considered appropriate or inappropriate. For example, self-injury and gesturing could be viewed as

behaviors attempting to escape a task. Although the function of escaping a situation is not inappropriate, self-injury is often deemed an inappropriate method of escaping. Gesturing for a break, on the other hand, is a more socially desirable response for escaping a task. Incorporating functional behavior assessments into the support plan process allows COS members to develop a comprehensive plan fostering the development of appropriate behaviors serving the same function as problem behavior.

There are many steps involved in completing a functional behavior assessment. Table 7 displays some common steps involved in the functional behavior assessment process. The first step in a functional behavior assessment is to define the targeted problem behavior in specific terms. If descriptions of the problem behavior are vague, it is difficult to determine appropriate interventions. Thus, the definition of a behavior must be simple, measurable, and recordable.

Table 7. Steps Involved in Completing a Functional Behavior Assessment

1) Define targeted problem behavior in simple, concrete terms.
2) Identify contextual variables influencing the occurrence of problem behavior.
3) Identify health-related events setting the occasion for problem behavior.
4) Identify consequences of problem behavior.
5) Identify function(s) of problem behavior.
6) Make treatment recommendations based on function(s) of problem behavior.

The next step in completing a functional behavior assessment is to identify the specific contextual factors increasing the likelihood of problem behavior occurring by collecting information on the conditions under which a person is most and least likely to engage in the behavior. Information about the contextual factors allows the behavior analyst to make predictions about when problem behavior will occur, and how to prevent the opportunity for inappropriate behavior to emerge. Multiple informants may be necessary to gather information about contextual factors, especially if problem behavior is situation-specific. For example, problem behavior may be occasioned by the presence of a particular person. Additionally, the problem behavior may serve to gain attention in some situations and to avoid attention in others.

The third step in completing a functional behavior assessment is to identify any health-related issues contributing to the occurrence of problem behavior. Health conditions of interest in relation to problem behavior can include chronic and acute conditions. That is, such conditions can be longstanding health challenges that persist over extended periods of time (e.g., gastroesophageal reflux disease [GERD]) or be brief and transient (e.g., seasonal allergies). Because health conditions can exist prior to the occurrence of problem behavior and precipitate their occurrence, a discussion of these variables seems particularly appropriate as a contextual influence on behavior. For example, it is

possible that someone engaging in head-hitting may be suffering from sinusitis. When the sinusitis is not present, head-hitting may be less likely to occur. Identifying health-related conditions influencing problem behavior are described later in this chapter.

After the problem behavior is defined and the appropriate antecedent variables are identified (i.e., contextual and health-related variables), the next step is to identify the consequences maintaining the behavior. Functions of behavior typically fall into four categories: Attention, Tangible, Escape, and Sensory. If a behavior serves an attention function, the person is attempting to acquire contact with another person in the environment. For example, head-banging may occur in the presence of a specific careprovider (antecedent condition), and maintained by attention delivered by that careprovider (consequence). The consequence need not be delivered every time the problem behavior occurs in order to maintain it. If the problem behavior serves a tangible function, the person is attempting to use the behavior to get access to activities or preferred items. For example, a person may see a board game they typically like to play and begin head-banging. A careprovider gives the game to the person, which reinforcers head-banging to access the game in the future. Problem behaviors serving an escape function are aimed at avoiding an activity or eliminating the presence of an aversive situation. For example, if a person does not like to do work activities, they may engage in head-banging to get out of doing the activity. Removal of the activity reinforces future head-banging when the person wants to escape the activity.

Behaviors that serve a sensory function provide a rewarding consequence without the presence of another person. This type of behavior is often called “self-stimulation”, in that the person delivers his/her own consequences by engaging in the behavior. For example, a person may engage in head-banging to produce a sound he/she finds rewarding. However, self-stimulation is only partially accurate. People may also engage in sensory-maintained behavior to reduce or avoid aversive perceptual stimulation from the environment. For example, a person may engage in head-banging when in a loud room. When removed from the loud room, the person ceases engaging in head-banging.

The fifth and sixth steps of a functional behavior assessment are to develop a hypothesis about why the problem behavior occurs and to make treatment recommendations. In each of the examples above, head-banging was used to illustrate the concept that a behavior itself cannot be haphazardly determined to have a particular function. Although each behavior has a purpose, that purpose varies from person to person, and from situation to situation. There are often times when one behavior serves many functions. In these cases, the behavior is said to be “multiply maintained.” Thus, a thorough functional behavior assessment can determine what contexts a person is likely to engage in problem behavior, and make treatment recommendations to target each function of the behavior.

Hypotheses about behavior function and treatment recommendations are only as good as the information provided about the problem behavior. In some

cases, indirect methods of data collections are sufficient for accumulating information from careproviders about problem behavior. In other cases, a more direct method of data collection may provide more information about the nuances surrounding the occurrence of problem behavior. However, there may be times that direct manipulation of the environment is necessary to tease out behavioral functions. The next section describes indirect assessments, direct assessments, and analogue analyses of problem behavior.

Indirect assessment. Indirect assessment relies heavily on the use of structured interviews with the consumer, careproviders, and other COS members who have responsibility for the consumer's welfare. Appendix A provides a detailed structured interview form used by the CIP. Behavior analysts should structure the interview so that it produces information about the settings the behavior does and does not occur in, who and how many people are present when the behavior occurs, the activities or interactions that take place just *before* the behavior occurs, and what happens *after* the behavior occurs. It is important to obtain information about setting events that can lead to problem behavior, such as task difficulty (or lack thereof), problems with transitions or interruptions in preferred activities, and predictability of routines. If the functions of behavior are evident after the interview is completed, an appropriate intervention can be developed to address those functions.

Careproviders often provide information about problem behavior through interviews. Indirect methods are user-friendly (i.e., requires little knowledge of behavior to conduct an interview) and cost-effective (i.e., require little time to complete). Although careproviders are valuable resources, the information provided can be misleading and is the least effective method for acquiring information pertinent for deriving hypotheses about behavioral function. This is primarily because careproviders are not trained to recognize symptoms of mental illness or MR (Bouras, Cowley, Holt, Newton, & Sturmey, 1998). Thus, they may not know what is relevant to report to an interviewer. Direct assessment methods may be incorporated into the functional behavior assessment to supplement information obtained from the interview process.

Direct assessment. Direct assessment involves observing and recording situational factors surrounding a problem behavior. Behavior analysts can determine through direct observation which environmental events precipitate and maintain problem behavior. The behavior analyst may observe the behavior in a setting that it is likely to occur, and record data using an Antecedent-Behavior-Consequence (ABC) approach. The events that occur just before the problem behavior (i.e., antecedents) are noted, followed by the behavior and what occurred directly after the behavior (i.e., consequences). This technique identifies possible environmental factors, activities, or temporal factors influencing the behavior.

The direct assessment method helps determine more accurately the parameters under which behavior occurs and does not occur. These methods of

assessment are more time consuming and expensive than indirect methods. Nonetheless, treatment recommendations are more likely to be related to the function of behavior. However, there is no systematic testing of hypotheses to insure a direct relation exists between problem behavior and its environment using this method. Thus, behavior analysts use functional analogues as necessary to examine the influence of environmental variables on problem behavior (Durand & Carr, 1991; Iwata et al., 1994).

Functional Analogue Assessment. There are times when interviews and direct observations suggest possible functions of behavior, but the results are still unclear. In these instances, a behavior analyst may systematically manipulate the hypothesized reinforcing consequences. The goal of such an analysis is to present and/or remove the consequence contingent upon the problem behavior. If the problem behavior reliably occurs when the consequence is presented and/or removed, the functional relation between the behavior and its environment has been empirically validated. There are typically four conditions that are alternated to analyze problem behavior.

One analogue condition is called the “control” condition. The Control condition serves as a baseline for problem behavior. No systematic manipulation of the environment occurs. In other words, the person is free to engage in any behavior and/or activity with no programmed consequences for engaging in problem behavior (e.g., activities are not removed from the environment contingent on problem behavior). If the problem behavior occurs during this condition, the behavior analyst simply ignores the person for a specified period of time. Ignoring the problem behavior insures that the behavior analyst is not providing attention contingent on problem behavior. After the specified period of time has elapsed, the behavior analyst will again interact with the person. The hypothesis is that problem behavior is less likely to occur when the person is given access to preferred activities. Thus, the baseline level of problem behavior in the control condition should be relatively low. However, a high base rate of problem behavior may simply be indicative of a sensory function. Therefore, other conditions must be systematically implemented to rule out sensory consequences.

Another condition is called the “Attention” condition. During the Attention condition, social consequences are delivered contingent upon the problem behavior. For example, if a person bangs his/her head on the floor, an analyst might say, “Why are you banging your head?” while briefly patting the person on the back. Attention (e.g., physical contact, conversation) is only delivered after the problem behavior has occurred. Attention is not delivered at any other time during this condition. If the behavior occurs at a high rate during the Attention condition, analysts often hypothesize that the problem behavior is maintained by attention.

A third condition is called the “Escape” condition. During the Escape condition, a person is presented with an instructional task thought to be difficult or boring for the person. This condition assumes the person is physically capable of completing a task. Thus, refusal to do a task is a motivational problem and not a skill deficit. If the person engages in problem behavior, the instructional task is terminated and/or removed for a brief period of time. If the problem behavior reliably occurs when the instructional task is presented and then removed contingent upon the behavior, analysts hypothesize that the problem behavior is maintained by avoidance or escape from demands.

A final condition is called the “Sensory” condition. During the Sensory condition, the person is left alone (i.e., not provided any materials or attention) for a period of time. If the problem behavior occurs at a high rate when there are no social consequences programmed for the behavior, analysts refer to the behavior as being non-social, or automatically-maintained. The hypothesis is that the behavior itself provides a reinforcing consequence, thus, the person engages in the behavior to produce a consequence.

Each of the above conditions is presented sequentially during an assessment period to elucidate behavioral functions. At times, the rate of problem behavior is high in more than one condition. It is during this time the analyst must decide if the problem behavior serves multiple functions or if the test conditions are not adequately identifying the maintaining consequences. Further analyses would be warranted, possibly fine-tuning the previous test conditions. After the maintaining consequences are identified, however, those results will be used to develop a strategy to help the person gain (or avoid) situations in more socially acceptable ways.

Summary of Functional Behavior Assessment

Several methods may be used to identify environmental sources maintaining problem behavior in people with dual diagnoses. Every attempt should be made to systematically analyze why problem behavior is occurring, and to determine an appropriate intervention that helps a person achieve the desired outcome by more socially appropriate means. Assessment of problem behavior can require several attempts to identify the maintaining consequences. A person’s needs change over time, making assessment an on-going endeavor. New life circumstances may also present challenges for people with dual diagnoses, requiring further analysis of the environment to help them cope with their changing world. Thus, assessment is a continual process. However, coping strategies may be difficult to develop without working alongside professionals who can assist with mental and physical health assessment and treatment. Furthermore, much of the information obtained by a functional behavior assessment could be very beneficial for a psychiatrist assessing possible environmental factors influencing mental health problems. The next section describes the psychiatric assessment process in a care coordination model.

Psychiatric Assessment

A psychiatric assessment of people with dual diagnoses can be similar to that of people in the general population. People with mild disabilities have reasonable verbal skills and are capable of talking with the psychiatrist during an interview. However, the assessment may be modified for people with more severe disabilities. Problem behavior for people with more severe disabilities may be a means of communication, serving to obtain attention or avoidance of some task. Therefore, the psychiatric assessment considers the function of problem behavior in people with dual diagnoses.

Psychiatrists have traditionally relied on the clinical interview for making diagnoses and monitoring treatment efficacy. There are several steps involved in the clinical interview, including a historical evaluation, consumer and careprovider interview, and diagnostic formulation. The intent is to gather as much information as possible about the general health, social, environmental, and developmental influences on a consumer's mental health and problem behavior. A holistic assessment of the consumer's unique circumstances can help tailor treatment recommendations.

Historical review. The historical evaluation includes a review of the presenting symptoms. The main advantage of historical evaluations is that a large amount of data can be obtained regarding past and current level of functioning. Pertinent information includes a description of concrete behaviors in various situations and settings, how the behaviors change over time, and the events that precipitate a behavioral response. It is also important to understand how careproviders react to problem behavior to determine if there are any interactions that contribute to problem behavior. Although some psychiatric problems may be unrelated to environmental interactions, it is important to rule out social causes of problem behavior before diagnosing a specific mental illness. The psychiatrist can evaluate social functioning by reviewing careprovider attitudes toward the consumer, as well as their understanding of his/her disability.

The historical evaluation also allows a psychiatrist to review past cognitive evaluations for premorbid behavioral and personality patterns, adaptive functioning, self care skills, and communication skills. Educational, habilitative, employment, and living situations may also contribute to the development of behavior and/or psychiatric problems. A psychiatrist may look at the quality, consistency, and appropriateness of daily educational and/or work experiences as contributors. The information gleaned from a record review about the adaptive functioning of a person with dual diagnoses not only indicates any challenges to obtaining appropriate services, but also indicates future directions to explore to improve overall mental health.

Another component of a record review is an outline of previous psychiatric and medical treatment. Details of previous psychiatric treatment include the type of interventions used (including psychotropic medications) and any psychiatric diagnoses explored by previous psychiatrists. The record review should include developmental and medical history, past etiological assessments, and coexisting general health disorders. The record review is also part of a health assessment in a comprehensive care coordination model (see next section). Health data includes medication administrations, illnesses, and any injuries that resulted from the problem behavior. In particular, psychiatrists are interested in health data related to side effects created by medication. For example, some medications cause diabetes. Thus, the psychiatrist would look for documentation of symptoms of diabetes and if medications were started as a result of psychotropic medication side effects. Similarly, psychiatrists examine the extent to which psychotropic medications have precipitated behavioral responses in the past.

Consumer and careprovider Interviews. After a record review, interviews are typically conducted with the consumer and his/her careproviders. The consumer interview may take longer than expected with someone in the general population because of his/her adaptive functioning skills. Thus, the psychiatrist modifies interview techniques to meet the consumer's communication skills. A careprovider familiar with the person's communication abilities may also help mediate the interview. However, one problem that can arise from having the careprovider present during a consumer interview is that the person may feel uncomfortable in a formal setting. It is important, therefore, to minimize the number of people present during the interview. It is also important to make the person feel at ease by using an informal conversation to evaluate the consumer's current status.

During the consumer interview, a mental status examination may be assessed. The consumer's general behavior and appearance are evaluated in terms of level of activity, any unusual behaviors, facial expressions, and how the person contacts the environment. The second area assessed in the mental status exam is the speech and thought processes of the consumer. Things such as the rate of speech, speech productivity, any preservative speech, and/or echolalia are evaluated. The third area of assessment is the mood and/or affect of the consumer. During this assessment, the psychiatrist evaluates how the person expresses emotions, the range of emotions, whether or not the emotions are appropriate for the conversation, or if any emotional responses are particularly pervasive. In order to judge the appropriateness of emotional responses in a conversation, some evaluation of thought content is important. This will also lead into an evaluation of the presence or absence of hallucinations, either auditory or visual.

The consumer interview is an assessment aimed at pinpointing social, emotional, environmental, and developmental functioning as they relate to mental illness and problem behavior. However, it is equally important to confirm

information obtained in the interview with careproviders who know the person best. The careprovider interview serves two purposes. First, the psychiatrist can determine the level of congruence between answers provided by the consumer and the careprovider. Second, the careprovider may elaborate on information that was either not shared by the consumer, or that the consumer found difficult to discuss. Discrepancies can be clarified at the end of the assessment. Information provided by the consumer and careproviders offers a broader understanding of the underlying mental health and behavior problem.

Diagnostic Formulation. Data from the assessments should be interpreted based on developmental level, communication skills, any disabilities, life experiences, education, and socio-cultural factors. Problem behavior may sometimes be more associated with distress or disability. To be clinically useful the diagnosis should focus on problem behavior not related to temporary reactions in the environment. However, a problem behavior may suggest an underlying mental disorder if it is characteristic of a DSM-IV-TR diagnosis. Once the psychiatrist has considered the person's strengths, deficiencies, and level of functioning, he/she will develop a multiaxial diagnostic formulation with an appropriate rationale for the decision.

Summary of Psychiatric Assessment

Psychiatrists are faced with a challenging task of identifying the extent to which problem behavior is related to untreated mental illness. This is not an easy task when diagnosing people with MR. It is sometimes unclear to what extent problem behavior is related to poor communication skills and/or level of functioning. If the problem behavior is characteristic of a defined mental disorder, the psychiatrist will evaluate whether or not other symptoms are present in order to confirm that particular diagnosis. In other words, problem behavior alone is not enough to formally diagnose a mental illness. Complicating the matter further is that this population may be twice as likely to have a medical disorder that complicates mental health (Service & Hahn 2003). Certain developmental disabilities are associated with increased risk for physical health problems, and medications used for treating these problems may contribute to psychopathology (Ryan & Sunada, 1997). The next section describes how a general health assessment is conducted to identify contributing factors to problem behavior.

General Health Assessment

Many health-related illnesses may have symptoms similar to a psychiatric illness. For example, hyperthyroidism can co-occur with symptoms of anxiety or depression. Thus, untreated health-related complications may lead to inappropriate psychiatric diagnoses and treatment with psychotropic medications. Health-related illnesses may also result in problem behavior. For example, someone who is nonverbal may engage in self-injurious behavior because of undiagnosed pain.

Because health-related conditions are often undiagnosed in people with dual diagnoses, problem behavior is sometimes diagnosed as having a behavioral function unrelated to the health-related circumstances. For example, a behavior analyst may determine that self-injurious behavior is an attempt to acquire attention. Although this may be true, the person is trying to acquire attention in order to receive medical attention. A behavior plan may not be very effective at reducing self-injurious behavior maintained by attention if health-related conditions are not first alleviated.

It may be that health-related conditions were not present until psychotropic medication was implemented to curtail psychiatric symptoms. For example, neuroleptics often cause weight gain and, thus, are a major cause of obesity in people with dual diagnoses. The scenarios listed here suggest that a multi-modal assessment is necessary to ensure all possible factors contributing to problem behavior are identified and treated. Before discussing how the behavioral, psychiatric, and general health assessments can be combined, we first describe how an initial general health assessment is conducted in a care coordination model.

During the initial assessment, the nurse practitioner (or PCP) has two primary duties: Conduct a historical record review and perform a physical examination. The historical record review provides a composite of any presenting illnesses and/or treatments currently implemented with the consumer. The physical examination allows the nurse practitioner to confirm historical information and/or identify any health conditions that require immediate medical attention. The purpose of historical and physical examinations is to establish the consumer's baseline physiological functioning status to use in future evaluations.

There are several important areas of historical information from which a nurse practitioner will develop a composite functioning level for the consumer. For example, part of the initial evaluation should include a nutritional screening to determine food likes and dislikes. This information will help identify whether or not food intake contributes to, or puts at risk for, any health-related conditions experienced by the consumer. Other important information related to nutritional habits include weight, height, basal metabolic index (BMI), dental status, gastrointestinal problems (e.g., dyspepsia, constipation), any difficulty swallowing, and/or participation in food preparation.

The nurse practitioner will also review the current list of medications, both prescription and over-the-counter. The purpose of this review is to determine if current health-related conditions are being treated appropriately and/or if any medication-related health problems could emerge. For example, some medications may cause weight gain. The medication regimen should also be corroborated by the medical records from the current PCP if they are living in the community to ensure all medications have been identified.

A third purpose for the historical record review is to note all previous surgeries, childhood illnesses, immunization history, and any special procedures or diagnostic tests completed for the consumer. This information will allow the nurse practitioner to monitor any health improvements and/or deterioration related to any previous medical procedures. Furthermore, the family history may contribute to congenital conditions and chronic diseases, such as coronary artery disease, diabetes, cancer, arthritis, thyroid disease, gastrointestinal disorders, and mental illness. Family history provides a means for the nurse practitioner to pinpoint the types of diseases the consumer is prone to develop.

The final purpose of a historical record review is to identify the social development of the consumer. This information includes marital status, living conditions, social support system, and employment and/or educational background. In addition to social development opportunities, the consumer's risk-taking behaviors related to health are evaluated. These include use of tobacco products, alcohol use, and illegal or prescription drug abuse.

All of the information gleaned from a historical record review provides the nurse practitioner with enough background information to begin a plan of care. However, it is important to first perform a physical examination to document any physical findings, health-related diagnoses, and important baseline physiological functioning status of the person with dual diagnoses. A review of systems (ROS) identifies any particular problem on the day of assessment that needs immediate medical attention. Vital signs, especially blood pressure and pulse should be taken. The examination should include the head and neck, eyes, ears, nose, and oral cavity. In addition, heart and lung sounds, inspection and palpation of the abdomen, skin inspection, musculo-skeletal evaluation, neurological exam, and peripheral pulses should be assessed.

If it is not possible to complete an exam due to time constraints or agitation/anxiety experienced by the consumer, arrangements are made to complete the assessment at a later time. It is sometimes easier to complete the exam in a familiar environment to the consumer. A lengthy examination may not be tolerated by the consumer, so modified exams should be considered. This would include simply corroborating previous health data and/or selectively evaluating health conditions for which the potential is greater for the consumer to develop.

Summary of General Health Assessment

Numerous conditions could cause a functional decline or present atypical and nonspecific symptoms, such as fatigue, weakness, or pain. Some of these conditions include heart conditions, thyroid disease, hearing and visual impairments, arthritis, and diabetes. Diagnostic overshadowing or attributing symptoms to the developmental disability alone has been noted as a major challenge when caring for persons with dual diagnoses because of difficulties

with separating the symptoms related to the disability from comorbid health impairments (Service & Hahn 2003). Historical information and physical examination provides direction for care of people with dual diagnoses. When health-related problems are addressed, the person's physical well-being is ruled out as the root cause of problem behavior. Thus, symptoms related to communication problems and/or mental illness can be treated by psychiatrists and/or behavior analysts.

VI. Developing Care-Coordination Interventions

As previously discussed in Chapter 5, comprehensive evaluations allow behavior analysts, psychiatrists, and PCPs (or nurse practitioners) to collaborate about the variables influencing problem behavior. The next step is for the clinical team to begin developing interventions based on the results of the evaluation. Initially, the behavior analyst, psychiatrist, and primary care providers develop a plan of care based on the comprehensive diagnostic assessment. Hypotheses about why problem behavior is occurring are developed from the comprehensive assessment and guide the process of deciding what interventions to use. The clinical plan of care is not intended to elaborate on specific interventions to be carried out by direct careproviders. Instead, the plan provides a structured framework guiding clinical decision-making and quality assurance.

Interventions address the variables that most likely influence the occurrence of problem behavior. However, preventative interventions are also recommended to curtail the possibility of new situations emerging that lead to problem behavior. Thus, interventions may focus on training the person to use appropriate ways of communicating, educating staff about proactive methods for managing environmental events leading to problem behavior, and/or developing psychiatric and health interventions that address health needs preventing the person from adequately coping with the environment. The intervention component of a comprehensive plan of care is developed specifically for careproviders to carry out in the consumer's home. Chapter 6 is intended to provide an outline for developing a comprehensive care coordination plan for people with dual diagnoses.

The Comprehensive Report

The first step in developing interventions for problem behavior is to compile all of the information from the behavioral, psychiatric, and health assessments into a governing document. Appendix B provides an outline of the comprehensive report used by the CIP. This document provides a benchmark for directing what interventions to use, how interventions should be implemented, and assessing any therapeutic or counter-therapeutic effects of intervention. The report can specify key implementation dates and provide objectives that should be met in order to execute additional interventions. The following paragraphs describe the various components included in a comprehensive report.

Introduction

The comprehensive report should begin with pertinent information about the person's abilities and limitations, what he/she likes and dislikes, historical information leading to the need for services, and a description of the problem behavior. Information about preferences can be accumulated from preference assessments in the evaluation phase. Historical information about the need for

services and problem behaviors can be obtained from a record review and the functional behavior assessment. Enough information should be provided for careproviders to familiarize themselves with the person. Once careproviders become acquainted with the person, they are better able to help him/her adjust to transitions in living arrangements. Case Example #3 below is an excerpt from an introduction of a person receiving services. Some information has been changed to protect her identity.

Case Example #3:

> Alexis is a 27 year-old Euro-American female (DOB: 06/15/1979) diagnosed with Schizophrenia, residual type, moderate mental retardation, cerebral palsy, and a seizure disorder. She likes to listen to music, watch TV, play Uno and puzzles, clean and shop. Alexis does not enjoy interactions with peers. She is aware of her daily schedule and is generally compliant with requests made of her. She frequently engages in tantrums, which includes yelling at staff and slamming the door to her room. This behavior occurs several times a month, but there is no formal documentation of the events. Alexis was referred to the Vanderbilt Kennedy Center Behavior Analysis Clinic to establish socially appropriate behavior and to manage medical and psychiatric needs.

This paragraph provides information about Alexis' preferences, problem behavior, and historical information leading to the need for services. First, there is a brief description of Alexis' physical characteristics to let careproviders know the kind of person with whom they will be working. For example, it is good for careproviders to know Alexis has some physical limitations due to her cerebral palsy. This will help them prevent exposing Alexis to uneven walking surfaces and, thus, minimize the possibility of falling. Second, her presenting psychiatric diagnoses are noted. The information about her specific dual diagnoses provides readers of the comprehensive report enough information to determine what mental, physical, cognitive, and social abilities the person may possess. (However, it is important not to categorize a person in a way that prevents habilitation goals to be established). Third, information is provided about Alexis' likes and dislikes. Knowledge of her preferences will allow the careproviders to assist Alexis in developing a daily schedule filled with preferred activities. Finally, there is a brief description of the problem behavior that impedes her ability to function in her living arrangement and the purpose for referral to the CIP.

A few other points should be emphasized about the introduction above. Information about Alexis' dislikes provides context for why tantrums may occur. In this case, Alexis does not like to interact with peers. Therefore, exposing her to social situations (or living arrangements) without the possibility of escaping may provoke problem behavior. Alexis is also capable of following a daily schedule. Thus, autonomy can be promoted by developing a schedule and allowing her to

participate in deciding how she would like to spend her day. The information can be used to guide recommendations for intervention later in the report. For example, recommendations can be made that she not be placed in a living arrangement with a peer who enjoys social interaction more than Alexis. Interventions may be aimed at limiting the provoking situations rather than directly intervening on the problem behavior.

In summary, an introduction should provide detailed information about the person with dual diagnoses. Although it is not an exhaustive list of the person's capabilities and/or limitations, it should allow careproviders to recognize key elements about the person's life that may influence problem behavior and promote a better quality of life. Furthermore, information can be updated over time to encompass changes in the person's life.

Functional Behavior Assessment

The second step in developing interventions for problem behavior is to provide detailed results of the functional behavior assessment. This section includes the operational definition of the problem behavior(s), description of the contextual variables influencing the occurrence of problem behavior, and a description of the consequences maintaining problem behavior. The assessment data provide a rationale for a hypothesized function of the problem behavior. Graphs displaying the frequency, duration, or intensity of problem behavior should be included in this section if possible. Graphs of problem behavior provide a visual guide for comparing current rates of problem behavior with changes in problem behavior related to a particular intervention. However, there are times when adequate documentation is not available to present graphs, so a descriptive analysis will suffice. It is also possible to determine parameters of problem behavior based on clinical records. For example, if medication is temporarily administered in an acute care facility for aggressive behavior, documentation of administration can serve as an indirect measure of how often aggression occurs. Graphs can be created using administration data to indicate a baseline level of aggression for which to monitor therapeutic effects of intervention when the person moves into the community.

Components of the functional behavior assessment describing health-related problems contributing to problem behavior should also be described in this section even though the problems may be addressed in the health assessment. The reason for this is because health problems may be antecedent events that make problem behavior more or less likely to occur. Behavior analysts often call these conditions "motivating operations" because they make avoiding, or gaining access to, a consequence more or less valuable. For example, a person with an ear infection may be more likely to engage in head-banging when his/her environment is noisy. Conversely, the person may not engage in head-banging in a noisy environment when he/she is not suffering from an ear infection. Thus, head-banging can still serve an environmental

purpose even if it is related to health problems. In a similar manner, a woman suffering from cramps related to menses may be less tolerant of demands placed on her than when she is not suffering from cramps. Case Example #4 demonstrates how the information in a functional behavior assessment can be used to derive at a hypothesized function of behavior.

Case Example #4:

> Janice's presenting problem behavior includes verbal and physical aggression. Verbal aggression can be defined as threats of physical assault toward other people. Physical aggression consists of hitting, punching, and/or using objects to physically harm another person. Verbal and physical aggression typically occurs in sequence, starting with verbal aggression. When Janice is upset, she will begin cursing, yelling, pacing, and crying. This can sometimes escalate to physical aggression. Episodes of aggression occur 2 or more times a month and can last between one to 10 minutes, ending in physical restraint. Physical aggression in the past has been severe enough to cause major injury to careproviders. Staff noted that Janice is more likely to be aggressive when she is tired or experiencing cramps which coincide with her menstrual cycles. She has also been aggressive with people who disagree with her, especially when someone says something negative about her family. Events that lead to verbal and/or physical aggression include a) When someone says something negative about her family or friends, (b) when someone disagrees with her, (c) when someone places unwanted demands on her (e.g., cleaning room), and (d) when she is experiencing cramps related to menses. Based on the information provided by Janice's careproviders, her aggressive behavior is maintained by negative reinforcement in the form of escape. When she is aggressive, she removes or escapes the undesirable situation. It is likely that a lack of sleep and cramps related to menses serve as motivating operations for aggressive behavior. That is, lack of sleep and cramps make aversive situations less tolerable and result in aggressive behavior.

This example illustrates multiple aspects of a functional behavior assessment. First, the problem behavior was operationally defined. Second, although there was no documentation of aggression (or medication administration for aggressive behavior), there is a description of how often she was restrained for aggressive behavior. Since aggression was occurring two or more times per month, the range served as a baseline for behavior in the community. Graphs could later be created based on future occurrences of aggression. Third, contextual variables influencing the occurrence of problem behavior were described so that a hypothesis of function could be explicitly

stated. The information provided in the functional behavior assessment suggested Janice did not like certain events in the environment. When these events occurred, she became aggressive. Finally, health-related problems were identified as motivating operations. Aggression was more intense when she did not get enough rest or when she was experiencing cramps. Behavioral interventions were developed to help Janice cope with events she felt were aversive, and to help careproviders manage her behavior when she perceived she was in an aversive situation.

Psychiatric Assessment

The third step in developing interventions for problem behavior is to provide detailed results of the psychiatric assessment. This section includes the multiaxial diagnoses, psychotropic and general health medications (including dosages), and results of the mental status exam. Information about the cognitive, developmental, and social functioning of the person should be noted in this section (if available) to provide a rationale for the diagnostic formulation and intervention recommendations. Case Example #5 illustrates how a psychiatric assessment may be incorporated into a comprehensive report. In an actual report, the introduction and functional behavior assessment sections would provide information about the person and the problem behavior he/she experiences.

Case Example #5:

Current Diagnoses

Axis I: Schizoaffective disorder, mood disorder NOS
Axis II: Mild Mental Retardation
Axis III: Obesity, hyperlipidemia
Axis IV: Severe
Axis V: 50

Psychotropic Medications

Neurontin 600mg tid
Depakote 750mg PO q HS
Haldol dec 100mg IM q month
Benzotropine 2mg bid
Thorazine I PO tid
Klonopin 0.5mg tid
Thorazine tid PRN

General Health Medications

Lipitor 10mg PO q HS

Beconase
Colase
MVI
Os-Cal
Zantac BID
Vitamin E
Tylenol PRN

Past Psychiatric history

Christie will apologize for aggressive behavior, but staff does not feel this is sincere. There were reported suicidal ideations in the past, but no plan was noted. Reportedly, the last vocalization of the ideations was 6 months ago. Christie gets nervous by new things and changes. No auditory or visual hallucinations reported. No homicidal ideations reported. In the month of March, she required 6 shots of 100mg Thorazine for her agitation. Staff says she will ask for a shot when she becomes agitated. She reluctantly attends school and anger management classes. She participates in a Psychoeducational group. For work, she used to be a peer counselor and she cleaned up hallways until “kicked off work.” For fun, she likes to swim, play ball, hike, watch television, listen to Rap music, dance and play cards. She reports she is afraid if it’s “Storming real bad” outside. She reportedly has poor family support, with dad allegedly being homeless and asks patients for money. Other family members reportedly call her on the phone and say “bad things.” Christie says she usually sleeps from 8PM until 6AM most nights of the week and takes a 30 minute nap every day, except Saturdays. On Saturdays, she will sleep from 8PM to 12 Noon, and take a nap after lunch until 4PM. She says her energy is “not that much” and her answer to how well she concentrates is: “Don’t know.” She says life is worth living and denies nightmares or flashbacks. She reports auditory hallucinations at 14-years-old of “Thought people talk about me bad.” No auditory hallucinations were noted since then. Peggy says “I like to eat.” She says she is willing to change her medications if that will help her lose weight. There were no past psychiatric issues report.

Mental Status Exam

Christie is morbidly obese. During examination, she appeared clean, her hair was combed, she was moderately groomed, and was calm. Cognitively, she was fully oriented to where she lives and to the day, date, month, year, and season. Christie was able to remember 2 out of 3 words after a few minutes of distraction,

> and could spell the work “Cat” backwards. Her speech rate and volume were normal, easily understood. There were no signs of psychomotor abnormalities. Christie’s insight and judgment were poor. Thought content showed no psychotic thoughts. Her thought process was linear, logical, and goal-directed. A DISCUS test was performed to evaluate involuntary movements created by some of her medication. Score= 0.

As previously stated, there is overlap in presenting symptoms between the psychiatric, behavioral, and general health assessment information. This is because the symptoms may be indicative of several factors related to problem behavior. For example, sleep disturbances can be indicative of an underlying mood disorder such as depression. However, sleep disturbances may also contribute to the occurrence of problem behavior maintained by negative reinforcement. That is, sleep may serve as a motivating operation for escape-maintained behavior. Finally, sleep may also be indicative of an underlying general health condition such as sleep apnea.

The symptoms of behavioral, psychiatric, and general health conditions may not be mutually exclusive. For example, suppose Christie suffers from sleep apnea, a common sleep disorder for people who are overweight. This disorder can be linked to psychiatric issues in at least two ways. First, the medications she takes contributes to obesity, which in turn can cause sleep apnea. Second, because she is not sleeping well as a result of sleep apnea, she may be experiencing distress, which can lead to depression. Sleep disturbances can then lead to outward symptoms of physical aggression. Some social situations become intolerable, leading to the desire to escape the situation. Thus, physical aggression becomes a method for removing consequences from the environment, particularly when Christie is tired.

General Health Assessment

The fourth step in developing interventions for problem behavior is to provide detailed results of the general health assessment. The health section includes presenting illnesses and/or treatments currently implemented with the consumer. Results of the physical examination are also presented. Case Example #6 illustrates how a general health assessment may be incorporated into a comprehensive report.

Case Example #6:

> Kara is a 21 year-old Euro-American female diagnosed with Impulse Control Disorder, Borderline Personality Disorder, and mild mental retardation. Kara has the following medical diagnoses: Allergic rhinitis, asthma, dyslipidemia, mild obesity (BMI 34), and refractive error with evidence of toxoplasma

> retinitis. She wears glasses but stated she did not have any vision problems. She is allergic to penicillin. Asthma treatment consists of Advair 250/50, Singulair, and prn Albuterol, and has been stable with this regimen. Kara recently quit smoking but wants to resume when she is discharged from the mental health institution.
> Nasonex is prescribed for the allergic rhinitis. Triglyceride levels done on 8/5/04 and 8/27/04 were 344 mg/dl and 426 mg/dl, respectively. LDL 8/04 was 128 mg/dl. Total cholesterol was 232 mg/dl and 221mg/dl on the same dates. At present, this is being treated with an 1800 calorie low cholesterol diet and exercise. However, staff report Kara has limited interest in a low fat diet. She was not aware of a family history of lipid disorders. Kara enjoys walking on a treadmill during PT, but the frequency and length of time are unknown.
> A review of her records showed weekly CBC monitoring due to Cloziril treatment, a thyroid panel (8/5/04) within normal limits (wnl), A1c (8/27/04) 5.0%, and a CMP (8/27/04) wnl. Staff reported she has frequent somatic complaints, viewed as attention seeking behavior. Kara has refused a pelvic exam at the last 2 annual physical exams.
> Kara has been on Depo-Provera for contraception, but is not sexually active. If her contraceptive regimen needs to change, it should be noted Trileptal may decrease the effectiveness of oral contraceptives. At this exam her blood pressure right arm was 136/96 and left arm 126/88. There should be continuous monitoring of blood glucose due to Clozaril therapy. A reduction or elimination of some of the psychotropic meds would have a positive effect on weight.

Review of Kara's medical records and a physical exam identified her general health concerns and current interventions being used in an institutional setting. Not only was this information valuable for developing health interventions for community placement, it was also helpful in monitoring any therapeutic or counter-therapeutic effects of behavioral and/or psychiatric interventions. For example, Trileptal is a common seizure medication, but it is sometimes used to decrease problem behavior. However, it can also lower the effectiveness of oral contraceptives. There was no indication of a seizure disorder, and seizure medication prescribed for behavioral purposes is often considered a chemical restraint. Therefore, it was important to consider the feasibility of Trileptal as a psychiatric intervention. Furthermore, the general health review implicated some of the current health interventions as precipitating events for problem behavior. For example, one of Kara's problem behaviors was physical aggression. Kara often threatened to use physical aggression against her staff as a way to get access to high calorie food. Her health intervention while in an institutional setting was a low fat, low cholesterol diet. The general health intervention was

implemented in her community placement as a precautionary measure to reduce obesity and cholesterol level. When staff attempted to stop her from consuming food discouraged by her general health plan, Kara became aggressive with staff. Thus, physical aggression served the purpose of obtaining preferred food items.

Developing Comprehensive Interventions

The remainder of this chapter will discuss common interventions implemented with people with dual diagnoses. First, we will describe common health conditions that may be associated with problem behavior. Next, we will describe common behavioral interventions for reducing problem behavior while increasing a person's quality of life. After describing general behavioral interventions, we will discuss psychotropic medication in the context of what medications are prescribed and how a psychiatrist works within the treatment team to use only the necessary dosages to achieve a desirable effect. We will conclude the chapter with some specific illustrations from the CIP.

General Health Interventions

Sleep Problems. The first-line intervention for sleep problems influencing problem behavior is the remediation of the sleep problem. This can be done through behavioral interventions to improve sleep hygiene (Durand, 1998), psychopharmacology (Roth, Hajak, & Ustun, 2001), or a combination of the two approaches. For example, it may be that reducing caffeine intake and going to bed at a reasonable hour increases the overall number of hours of sleep. Conversely, it may be necessary for medication to induce sleep. This may suffice for instances in which sleep deprivation evokes problem behaviors that do not otherwise occur. However, in many instances, problem behaviors are exacerbated by sleep deprivation, but occur even when sleep problems are not present. In these instances, behavioral interventions need to be in place to actively focus on increasing appropriate behaviors and decreasing inappropriate behaviors, in addition to sleep promoting interventions.

Gastrointestinal disorders. If a functional behavior assessment and health exam suggests that GERD symptoms are related to the occurrence of problem behavior, the first step is to reduce the GERD symptoms and re-assess the pattern of problem behaviors. Typically, health interventions focus on dietary changes and/or pharmacological intervention. Dietary interventions often limit high fat meals, acidic foods, peppermint, chocolate, and alcohol. Pharmacological interventions include antacids, histamine (H2 receptor) blockers and proton pump inhibitors. Recently, drugs such as esomeprazole (Nexium®), have proven extremely effective in treating GERD symptoms, even in previously unmanageable cases (Johnson & Hedge, 2002).

Because of the wide range of bowel movement frequencies among individuals, it is important to determine a person's baseline bowel habits in order to assess deviations from the norm for that person. The most direct effect of constipation is to produce abdominal discomfort. Typically, this discomfort is reported to increase directly with the time since the last bowel movement. Often, the lack of voiding is also associated with a decrease in food intake. In general, the onset of constipation results in increased problem behavior and voiding coincides with a decrease in these behaviors.

If the constipation is new or has been treated conservatively without effect, a medical examination is indicated to screen for metabolic, endocrine, or neurologic causes. If the health assessment is negative, dietary interventions including increased fiber intake may be warranted. As with other health conditions, once a functional behavior assessment and health exam have identified constipation as a variable influencing problem behavior, the primary intervention is the elimination or management of the health condition.

Allergies. In an allergy management plan, allergen avoidance is the most effective form of treatment. Environmental controls include vacuuming and dusting frequently, removing rugs, and keeping pets out of the bedroom. Medical management includes the first generation antihistamines (e.g., diphenhydramine [Benadryl®]). However, side effects of these medications can include drowsiness, dry mouth, urinary retention, and constipation. The second generation antihistamines (e.g., cetirizine [Zyrtec®]) have the advantage of a simpler dosing schedule and fewer side effects. Intranasal corticosteroids (e.g., mometasone [Nasonex®]) are also effective agents with few side effects. If problem behavior persists after medical management, then behavioral interventions should be added to the treatment package to directly reduce the behavioral concerns.

Dysmenorrhea and premenstrual syndrome. Women with dysmenorrhea will show symptoms beginning with the onset of menstruation (Uphold & Graham, 2003). If dysmenorrhea is associated with problem behavior, reduction of the dysmenorrhea symptoms should first be attempted. The primary treatment for dysmenorrhea is medication that suppresses the production of prostaglandins. The nonsteroidal anti-inflammatory drugs (NSAIDS) accomplish this task, in addition to having analgesic properties. Oral contraceptives are also highly effective in treating dysmenorrhea, and may be used instead of NSAIDS or in addition to them. If dysmenorrhea symptoms are not substantially reduced and/or problem behaviors persist or show a more dispersed temporal pattern, behavioral interventions may need to be developed focusing on the environmental consequences maintaining behavior.

A functional behavior assessment of problem behavior should be conducted when putative health conditions are present, as well as absent. This allows therapists to evaluate the contingencies maintaining the problem behavior and the influence of the health condition on this behavior. Interventions with these individuals will usually be multifaceted, targeting the health conditions, teaching communication skills, and redesigning the environment to make

demanding activities more pleasurable for the person. It may be necessary to determine the role of general health conditions prior to developing behavioral interventions. That is, it may be desirable to develop an intervention for the health condition prior to implementing antecedent and consequence-based procedures. This would allow the role served by the health condition(s) to be more clearly elucidated prior to the implementation of a more comprehensive intervention. Two possible benefits may result from this tactic. First, a clearer understanding of how health conditions contribute to problem behaviors will be revealed by isolating their effects on behavior. Second, in some cases behavioral issues may resolve following the treatment of the health condition. Individuals with an in-depth knowledge of health conditions need to work alongside individuals with educational and behavior-analytic skills to identify both biological and environmental variables contributing to problem behavior.

Behavioral Interventions

Behavior analysis has proven invaluable by demonstrating successful behavior change in diverse areas of application such as community, developmental, organizational, and clinical psychology; behavioral medicine; general and special education; speech and hearing sciences; and, social work, to name but a few. Research on the functions of problem behavior has led to changes in the way treatment is conceptualized. For example, functional behavior assessments are typically a pretreatment requirement and treatment selection is determined by the results of the functional assessment.

In Chapter 5, we described in detail the core components of a functional behavior assessment. This assessment process is geared to identify the environmental contingencies that are maintaining problem behavior. Results from such an assessment can be used to build a behavioral intervention plan to teach the person with dual diagnoses alternative appropriate behaviors, such as those used to escape from aversive situations. To illustrate, the person could be taught to say, “I need a break” or “I need help” to escape a noxious task or make it less aversive (e.g., cleaning his/her room). This new phrase could be used in place of self-injury that previously produced escape from the aversive task for the person. Additionally, the person should also receive regular medical evaluations to ensure a healthy disposition. If problem behavior appears to be cyclical and temporally corresponds to medical complications, then such information should be made available to medical personnel.

If general health symptoms are substantially reduced or eliminated through immediate remediation and problem behavior persists, a functional behavior assessment should be re-conducted to further identify environmental antecedents and consequences associated with problem behavior. A second-line of intervention may be needed to target both management of the health condition and behavioral interventions related to the environmental consequences maintaining problem behavior. Behavior analysts, with expertise in functional assessment and behavioral intervention plans should be involved.

Proactive behavioral treatments. Many of the early behavioral interventions used arbitrary consequences to eliminate or reduce problem behavior. Punishment technologies can involve the use of aversive stimuli such as electric shock, spanking, water mist spray, and ammonia that are administered when the individual engages in problem behavior (e.g., Cunningham & Linscheid, 1976; Dorsey, Iwata, Ong, & McSween, 1980; Tanner & Zeiler, 1975). Such treatments have fallen out of our favor in recent years for a number of reasons. For example, the use of aversive treatments with individuals who are unable to give informed consent has been the source of much public controversy with several State Legislatures banning the use of such protocols.

Differential reinforcement strategies provide positive and/or negative consequences to a person for not engaging in problem behavior. Examples of such strategies include differential reinforcement of other behavior (DRO) or differential reinforcement of incompatible behavior (DRI). With DRO the individual receives a rewarding stimulus if he/she does not engage in the problem behavior for a predetermined period of time. This may include giving him/her a positive consequence (e.g., preferred item) or removing an unwanted activity (e.g., attending a meeting). In DRI, the individual receives a reward for engaging in a behavior that is incompatible (e.g., washing dishes) with the problem behavior (e.g., striking head with fist).

However, the first priority of a behavior analyst is to promote a healthy quality of life aimed at reducing social conflict that creates problem behavior in the first place. Proactive strategies may include:

1) Designing an environment that supports a lifestyle that is meaningful and preferred by the service recipient;

2) Supporting significant relationships with family, friends or staff;

3) Helping the individual to develop and use a communication style that effectively expresses desires, feelings, needs and frustrations;

4) Developing routines, activities schedules, teaching strategies and reinforcement mechanisms that encourage participation in the community;

5) Training staff to recognize the service recipient's communication style, including behaviors that may be used as a way to communicate;

6) Recognizing precipitating events that may lead to behavior or mood changes and promoting changes in staff behavior to accommodate (e.g., ordering an individual to do something or demanding compliance may be replaced with offering suggestions, making cooperative requests or providing alternative choices); and

7) Maintaining an environment that processes information about factors that influence behavior (e.g., current medical state; current stressors) and making adjustments as needed.

Reactive behavioral treatments. Behavior analysts also recognize that many problem behaviors develop over the course of a lifetime and do not immediately subside when an intervention is implemented. New skills and routines also take time to learn, and how rapidly they are learned depends on each person. Therefore, there are times that reactive strategies are necessary to reduce problem behavior and the injuries it may cause. Furthermore, reactive strategies provide a framework for what to do once a problem behavior has already occurred or is in progress. Reactive strategies include:

1) Providing instruction regarding how staff should respond to behaviors that serve as indicators (ranging from mild to intense) of an impending behavior incident, including utilization of approved crisis intervention techniques;

2) Providing description of precipitating events that have been shown in the past to lead to changes in the service recipient's behavior or mood, as well as, appropriate staff response to such events;

3) Providing information regarding when to seek assistance in attempting to manage behavioral events, including contact information and the type of assistance that may be provided;

4) Providing information about appropriate supports to access as behavior challenges intensify, such as the Mobile Crisis Team;

5) Detailing when and how to contact the psychologist, psychiatrist, nurse, behavior analyst, behavior specialist, the team leader, or other staff; and

6) Providing information regarding appropriate times and guidelines for staff documentation of responses to challenging service recipient behavior.

Developing a behavior support plan. A behavior support plan (BSP) provides the details of how to support the behavioral needs of a person with dual diagnoses. Requirements for a BSP include:

1) The BSP must be written by a behavior analyst (Collaboration with a behavior specialist is appropriate if a behavior specialist is involved in the provision of behavior services.);

2) If the development of a BSP is a collaborative effort between a behavior analyst and a behavior specialist; responsibility for the plan and its implementation is retained by the behavior analyst;

3) The clinician developing the plan must consider input from the Planning Team and others having direct experience with the service recipient;

4) The plan must contain a listing of individuals having input in development of the plan, including the service recipient and direct support staff; and

5) The plan must utilize the least intrusive interventions expected to be effective in decreasing target behaviors and increasing appropriate alternative behaviors (*for a list of behavioral interventions and their level of intrusiveness, please refer to the DMRS Provider Manual, Chapter 12*).

A BSP is only as effective as its implementation by careproviders. That is, if procedures and/or the format of a BSP are too complicated or labor intensive for staff to implement, the likelihood of implementation is much lower. The more complicated procedures become, the more training that is often required to insure implementation. Therefore, user-friendly language in a succinct format is often necessary to reduce the response effort by those implementing the plan. The BSP includes a clearly written, user- friendly description of how to implement the plan, including procedures for increasing appropriate behavior, procedures for decreasing problem behavior, what to do in response to a crisis, a description of the staff behaviors that should not occur in order to minimize behavioral outbursts, and what information the staff is responsible for collecting. Implementation and monitoring of BSPs and comprehensive care-coordinated interventions will be discussed in more detail in Chapter 7.

Psychiatric Interventions

Psychotropic medications used to treat psychiatric symptoms in people with dual diagnoses are similar to those used in the general population. Common psychotropic medications include antidepressants (e.g., fluoxetine), mood stabilizers (e.g., gabapentin), and neuroleptics (e.g., haloperidol). Each medication class targets specific symptoms related to a particular psychiatric diagnosis. Several medications within a category are typically tried when one fails, rather than prescribing from a different category. This is because each medication within a category may differ chemically and the person may respond differently to another intra-class medication.

People with dual diagnoses are more likely to be prescribed psychotropic medication. Because of this, they are more likely to experience negative side effects of psychotropic medication. However, the types of side effects experienced are no different than those experienced by the general population.

Examples of side effects include exacerbation of problem behaviors, onset of psychosis, development of involuntary motor movements (i.e., tardive dyskinesia), and disruption of adaptive skills (Aman & Singh, 1988; Pyles, et al., 1997). The negative side effects experienced by people with dual diagnoses may be due to behavioral masking of the symptoms of medication toxicity (Aman, Paxton, Field, & Foote, 1986). For example, a person may develop symptoms of medication toxicity (e.g., confusion), but because he has a limited verbal repertoire, unintelligible speech is misconstrued as a symptom of his disability instead of the medication. Thus, medication may be continued despite the lack of therapeutic gain.

Psychotropic medications known for harmful side effects are used only after other medications with fewer side effects have been considered. If the benefits of using medication outweigh the risks of using medication, psychiatrists are more likely to prescribe them in order to target the psychiatric symptoms. More and more, psychiatry is governed by the motto, “start low, go slow,” when titrating medication to treat psychiatric problems. This means starting a medication at a lower dose and gradually increasing doses. Using this method of titration allows the psychiatrist to identify and reduce unnecessary side effects. Decisions about what medication to use and the dosage result from review of past medical history, the medications currently being used, any medical problems experienced by the person, and behavioral data when making treatment decisions. Behavioral data is used to determine the effects of psychotropic medication on problem behavior. The following section discusses the classes of medication, noted side effects, and their effects on problem behavior.

Antidepressants. This category of medication is used to treat symptoms of depression and anxiety disorders. Commonly prescribed antidepressants include serotonin specific reuptake inhibitors (SSRIs), tricyclics, and monoamine oxidase inhibitors (MAOIs). Antidepressants require several weeks to show any effectiveness. Once a therapeutic effect is accomplished, office visits will be less frequent. The medication will be continued several months after the symptoms of depression have diminished. Long-term use may be required if depressive symptoms are recurrent.

Some antidepressants can trigger manic symptoms in people with bipolar disorder. Increased observation by a psychiatrist during medication titration will identify any increase in irritability, grandiosity, euphoria, or hyperactivity. Some side effect particular to tricyclic antidepressants are sedation, hypotension, and cardiac arrhythmias. Dosages above the recommended maximum therapeutic dosage can be fatal. Furthermore, use of these medications may lead to suicide in people who are feeling suicidal. Side effects of MAOIs may include liver inflammation, heart attack, stroke, and seizures. People taking MAOIs may also experience high blood pressure related to certain foods and/or combinations of medication. SSRIs typically have fewer side effects than the other antidepressants, thus they are prescribed more often. However, people taking

SSRIs may experience nausea, nervousness, insomnia, diarrhea, rash, agitation, or sexual side effects. Although there is some evidence that SSRIs may be related to suicide, it is generally safer in overdose. Common side effects of all antidepressants are illustrated in Table 8.

Empirical evidence for psychotropic medication effectiveness on problem behaviors generally is equivocal in people with developmental disabilities and/or dual diagnoses (Aman, Sarphare, & Burrow, 1995; Matson et al., 2000). There is a lack of controlled studies systematically demonstrating the efficacy of psychotropic medications. Most of the research involves case studies with poor measurement of problem behavior. Furthermore, most people are often prescribed multiple medications, making drug interactions more likely to mask the effects of any particular medication. Nonetheless, there is some evidence that SSRIs may reduce destructive, aggressive and self-injurious behaviors in people with profound developmental disabilities (Janowsky, Shetty, Barnhill, Elamir, & Davis, 2005; Savner, Fox, Lowry, & Lowry, 1993). Treatment with antidepressants may reduce problem behavior if the behavior is a symptom of an underlying psychiatric disorder.

Table 8. Common Side Effects of Antidepressant Medications

Dry mouth	Nausea
Urinary retention	Gastrointestinal disturbance/diarrhea
Blurred vision	Abdominal pain
Constipation	Inability to achieve an erection
Sedation	Loss of libido
Sleep disruption	Inability to achieve an orgasm
Weight gain	Agitation
Headache	Anxiety

Mood stabilizers. Mood stabilizers are primarily used to treat symptoms of bipolar disorder and anxiety disorders. They have a “calming” effect on people who become highly agitated and aggressive. Common mood stabilizers include lithium, depakote, carbamazepine, or gabapentin. Similar to other psychotropic medications, mood stabilizers may take several weeks to maximize the therapeutic dose for an individual. Mood stabilizers are also anti-convulsants that are prescribed for seizure disorders. Thus, a mood stabilizer may or may not be prescribed for an underlying psychiatric disorder. Frequent blood draws are often necessary to keep the blood level of the drug at a specific concentration. Needless to say, this procedure is aversive and may potentiate problem behavior. Table 9 illustrates common side effects related to mood stabilizers.

Mood stabilizers are frequently used in people with mood and anxiety disorders who also display problem behavior (see Matson et al., 2000 for a review). The overall effect of mood stabilizers is a decrease in behaviors like aggression and self-injury. For example, valproate has been shown to decrease aggression in people diagnosed with bipolar disorder and mild mental retardation (Sovner, 1989). Other disorders for which valproate has shown some effect on problem behavior includes pervasive developmental disorders, schizophrenia, or mood disorders (Ruedrich, Swales, Fossaceca, Tolvier, & Rutkowski, 1999).

Table 9. Common Side Effects of Mood Stabilizers

Hypothyroidism	Tremor
Excessive urination	Indigestion
Increase thirst	Nausea
Hair loss	Dizziness
Acne	Sedation
Fatigue	Weight gain
Muscle weakness	Impeded memory
Headaches	Lower red blood cells

Neuroleptics. Neuroleptics (also called antipsychotics) are used primarily with people who display symptoms of schizophrenia or bipolar disorder. There are two groups of medications in this class: Typical and Atypical neuroleptics. Typical neuroleptics are tranquilizers primarily used because of their sedative properties. However, atypical neuroleptics are becoming more common because of the significant health problems caused by traditional neuroleptics. Atypical neuroleptics are less likely to cause extrapyramidal side effects like tardive dyskinesia. Although neuroleptic medications cannot cure mental illnesses, they are effective in eliminating or reducing psychotic symptoms such as delusions, hallucinations and thought disorders. People prescribed neuroleptic medications may see some effects within a few weeks. However, medications like clozapine® may take up to one year before effects is noticed. Furthermore, blood tests are required to monitor white blood cell count. White blood cells are necessary to fight off disease and infection. Side effects for neuroleptics are medication-specific and differ depending on the person. Table 10 illustrates common side effects of neuroleptic medications.

Neuroleptics are the most prescribed medication class for people with dual diagnsoses engaging in problem behavior (Matson et al., 2000). This is most likely the case because of the relatively short period of time to observe

reductions in aggressive behavior. However, there is little evidence to suggest that the symptoms have not been masked by the potential for neuroleptics to cause sedation. There is often no indicator of how such medication influences adaptive skills or how the medication influences problem solving ability.

Table 10. Common Side Effects of Neuroleptic Medications

Drowsiness	Dry mouth
Weight gain	Constipation
Loss of periods in women	Fluid retention
Dizziness	Headaches
Stiffness or trembling in muscles	Increased appetite
Tardive dyskinesia	Sexual dysfunction
Low blood pressure	Decreased white blood cells
Fast or irregular heart beat	Neuroleptic Malignant Syndrome
Epileptic seizures	Increased glucose or lipid levels

Anxiolytics. Another class of psychotropic medications commonly prescribed to people with dual diagnoses is those targeting symptoms of anxiety disorders. Benzodiazepines are prescribed for short-term relief of severe and anxiety. They are used to treat a wide variety of conditions that require relaxation of the central nervous system. They are typically used for short durations, such as when someone experiences a panic attack. However, long-term use may be required for severe anxiety. Non-benzodiazepines are similar in action to benzodiazepines, but lack the sedation and dependency issues associated with the latter. Barbiturates are another anxiolytic medication for anxiety. However, many psychiatrists consider these drugs as obsolete because of their risk of dependency. Psychiatrists will typically attempt antidepressants for anxiety disorders before attempting the habit-forming anxiolytics. Table 11 displays common side effects of various anxiolytic medications.

Anxiolytics have an immediate effect on aggressive and self-injurious behavior. Anxiolytic such as lorazepam are often used in institutional settings to reduce behavioral outbursts. However, psychiatrists in community settings are reluctant to prescribe such medications because of the addictive properties of this class of medication. Anxiolytics produce a state of euphoria for the recipient

of the medication. This side effect may lead to a person seeking access to the medication. Since aggression and/or self-injury often leads to acute administration of this class of medication, the person may engage in problem behavior in order to receive the medication. Thus, problem behavior in this case has been positively rewarded by administration of an anxiolytic.

Table 11. Common Side Effects of Anxiolytic Medications

Sedation	Respiratory suppression
Lethargy	Addiction
Apathy	Poor coordination
Restlessness	Irritability
Euphoria	Dizziness
Psychomotor retardation	Inability to perform mental tasks
Hallucinations	Psychosis

Given the problems with medicating people with dual diagnoses, some psychiatrists work collaboratively with behavior analysts to develop interventions based on the functions of problem behavior. Problem behavior may respond better to behavioral interventions than medication if it is a primary means of communicating with social mediators in the environment. Therefore, it is considered best practice to use medication only after a functional assessment is conducted and indicates nonsocial functions of problem behavior. When medications are prescribed, on-going functional behavior assessment and evaluation can help in the decision-making process about the course of treatment. Not only can data be collected about the efficacy of psychotropic medication, but medication-environment interactions can be quickly identified.

Comprehensive Interventions from the CIP

The remainder of this chapter provides some examples of comprehensive plans of care targeting problem behaviors of people with dual diagnoses moving from a regional mental health facility. The multi-component interventions target psychiatric symptoms, health conditions related to the administration of psychotropic medication and/or primary health conditions that may cause problem behavior, and behavioral strategies for improving environmental conditions that support positive behavior. The plans of care below correspond to the case illustrations outlined throughout this and previous chapters. The aim of the following illustrations is to provide clinicians with a structured format in which plans of care can be developed and monitored.

Case Example #1 (Christie, Chapter 3):

Target Behaviors

Physical aggression: hitting, kicking, scratching and/or pushing others.
Verbal aggression: calling names, cursing, yelling, and/or interrupting others.
Self-injury: cutting self with sharp objects or banging her head against the wall.

Hypothesized Function(s)

Based on the information provided by Christie's care providers, physical aggression or self-injury provides Christie with opportunities for attention and access to activities or items that have been delayed or denied. Physical Aggression is also negatively reinforced by removing aversive events like talking negatively about her or using a harsh tone of voice. Weekly visits to Christie's residence has revealed that she becomes verbally aggressive when she does not get her way, leading to the hypothesized function of positive reinforcement in the form of access to preferred activities.

Current Diagnoses

Major Depressive Disorder (Recurrent, Severe) with Psychotic features, Impulse Control Disorder, Mild Mental Retardation, Diabetes, Obesity, and Hypertension

Current Psychotropic Medications

Ambien 5mg at bedtime as needed for insomnia
Thorazine 100mg by mouth or injection every 4 hours as needed for agitation.
Trileptal 1200mg twice a day.
Olanzapine 10mg in the AM and 20mg at bedtime
Zoloft 150mg every AM
Effexor XR 75mg every AM.

Other Medications

Depo-Provera 150mg every 3 months
Metformin 500mg every AM
Procardia 10mg every 8 hours as needed for hypertension
HCTZ 25mg every AM
Prevacid 30mg every AM
Accupril 20mg every AM
Calcium with Vitamin D.
Eucerine cream

Ibuprofen
Colace
Clindamycin topical

Intervention Recommendations for Problem Behaviors

1. Continue the token economy established at the institution with some changes to the way it is administered. We will provide procedures for staff to follow in the behavior plan. We DO NOT recommend taking away any earned rewards as a method of punishment. This will cause more harm than good (e.g., increased aggression or lack of trust).

2. Christie should be involved in meal planning and scheduling of activities throughout her week. Preferred activities must be regularly scheduled, with alternatives available in case things happen that impede the ability to follow the daily schedule. Christie likes to stay busy, so an active schedule is required to reduce anxiety.

3. Non-contingent praise to show Christie she is supported and that she is engaging in appropriate behavior. Christie finds staff attention highly reinforcing. Providing her with frequent positive comments about how well she is doing and how much she is liked will be an effective antecedent intervention to enhance her quality of life.

4. Christie will benefit from incidental problem solving training. Staff should practice stating a problem, identify solutions for the problem, select the best solution, and follow through with the solution. By going through these steps consistently when Christie is having a good day, she will be better prepared to deal with problems that arise which frustrate her. Identifying appropriate ways to handle situations in which she wants attention and/or preferred activities or items are delayed will help reduce the possibility of aggressive outbursts.

5. Christie will benefit from Assertiveness Training. One concern expressed by everyone who knows her is that she typically feels “down” after conversations with her family. They frequently tell her negative things about herself, which makes her more likely to become agitated around others. She can learn to tell people “no” in situations where people try to exploit her. Assertiveness Training will also help her practice safe behavior in community settings, such as how to approach a stranger, or asking a person to identify him or herself before unlocking the door. Someone who is attention-seeking faces many challenges of exploitation and abuse if they are not prepared to deal with the situations.

6. It may be possible to control Christie’s agitation and blood pressure by using scheduled clonidine or tenex. This would accomplish 2 goals and

streamline her medication regimen. We recommend titrating new medications while weaning current hypertension medications for best control of agitation while maintaining adequate blood pressure. Using Procardia on an as needed basis has been shown to be counter productive. If an “as needed” blood pressure medication is required, Clonidine could also be used 0.1 mg every 4 hours as needed for systolic blood pressure > 160 and/or diastolic blood pressure >110. Her ACE inhibitor Accupril can have its effects diminished by the Ibuprofen she is taking. In summary, I think Clonidine or Tenex would be better choices for her to control her blood pressure and agitation simultaneously.

7. We recommend weaning olanzapine slowly, over a period of months. The clonidine or tenex can increase sedation, which can be reduced by decreasing the olanzapine. This regimen would be better for her sedation, diabetes, appetite, and obesity.

8. Discontinue her thorazine use. This would help reduce her risk of side effects such as Tardive Dyskinesia and extrapyramidal symptoms, as well as the inherent risk associated with injecting medications.

9. We recommend consolidating her antidepressant therapy into either zoloft or effexor to simplify her medication regimen, once the olanzapine, thorazine, and hypertension issues are sorted out.

10. Because of her obesity and diabetes, we recommend diet control to reduce her weight gain and help improve her diabetes management. We also recommend routine and regular monitoring of her diabetes and lipids, which can be affected by the medications.

11. Develop a nutritional menu that provides Christie with 1800 calories per day. Limit high-calorie foods and trips to fast food restaurants. Christie may have a “cheat” day in which she may go to a restaurant if she has followed her diet throughout the week.

12. Christie will benefit from daily walks, swimming on a regular schedule, and light exercise in addition to the diet. She should track her own weight loss and establish goals for herself with staff help. Christie will need lots of coaching and praise for setting and accomplishing her goals for weight loss and for other goals she establishes.

Case Example #2 (Melanie, Chapter 4):

Target Behaviors

Verbal aggression: threats of physical assault.
Physical aggression: hitting, punching, and/or using objects to attack others.

Hypothesized Function(s)

Based on the information provided by Melanie's care providers, her aggressive behavior is maintained by escape – when she is aggressive, she removes or escapes the undesirable situation. It is likely that a lack of sleep and cramps related to menses serve as establishing operations for aggressive behavior. That is, lack of sleep and cramps make aversive situations less tolerable and result in aggressive behavior.

Current Diagnoses

Posttraumatic Stress Disorder, Major Depressive Disorder, Recurrent, In Partial Remission, Mental Retardation, Mild Tuberous Sclerosis, seizure disorder, hypothyroidism

Current Psychotropic Medications

Trileptal 900mg bid
Klonopin 1mg bid
Seroquel 400mg bid
Neurontin 900mg tid
Zoloft 100mg q AM
Depakote 500mg q HS (level 57 on 9/2/04 12 hrs after last dose)
Thorazine 75mg PO/IM q 4 hr PRN
Lithium was not listed but she has a level of 0.7 on 9/2/04 so must be on.

Other Medications

Synthroid 0.125mg q AM
MVI
Ibuprofen 400mg bid for 3 days of menstrual cycle

Intervention Recommendations for Problem Behaviors

1. Melanie should be taught to identify a problem, solutions to solve the problem, and to implement a problem solving choice in order to get the things she wants in a socially appropriate manner. She will also be taught how to deal with people who disagree with her or who talk about her family.

2. Since Melanie's aggression is more likely to occur during her menstrual cycle, she should be given a calendar for tracking, and to more accurately predict when her cycle may begin. This proactive approach will help

Melanie anticipate possible discomfort and irritation associated with her menstrual cycle. Staff can also use this to give her Ibuprofen for the discomfort.

3. Melanie should receive a token for problem solving and for choosing an alternative method of talking with people who have upset her. If she accumulates at least three (five possible) tokens during the week, she can have a reward of her choosing over the weekend.

4. By providing Melanie with praise and attention on a regular basis, it may help decrease the likelihood that she will become frustrated with others. She should receive praise for acting appropriately, and using her words (and not her body) to express her feelings. It is important for Melanie to feel that she is in a supportive environment where she can be reminded of her good choices and accomplishments often. Praise should be provided regularly, and should not just when she has done something specific. It should be delivered sincerely and at unexpected times.

5. Continue medications as currently prescribed for the first month post-discharge. When she appears stable based on the data from her behavior plan, we will begin to taper medications.

6. Start reducing seroquel and then neurontin because of the negative side effects. Depakote should be considered for titration after these two medications due to sub-therapeutic dosing for seizures.

7. Work with a neurologist on trileptal and klonopin to determine need.

8. Melanie might benefit from sex education and counseling, particularly surrounding her experience with being sexually abused.

9. Daily dental hygiene/Dental check-ups are necessary due to her poor hygiene and medication regimen.

10. Monitor labs (CBC, thyroid profile).

11. Education for staff regarding what to look for in seizures.

12. Exercise should be part of her daily routine .

13. Consider Hepatitis B vaccine.

Case Example #3 (Alexis, Chapter 6):

Target Behaviors

Tantrums: slams doors, yells, curses, and is not easily redirected.

Hypothesized Function(s)

Based on the information provided by Alexis and her care providers, tantrums occur as a result of removing a positive reinforcer (i.e., her radio). Extinction induced tantrums occur when a negative punishment contingency is established. For Alexis, tantrums are more likely to occur when her radio is removed contingent upon listening to the radio too loudly.

Current Diagnoses

Schizophrenia (residual type), Moderate Mental Retardation, Cerebral Palsy, possible seizure disorder

Current Psychotropic Medications

Risperdal Consta 50MG intramuscularly every 2 weeks.
Risperdal tabs 3mg twice a day by mouth
Amantadine 100mg twice a day by mouth
Thorazine as needed for agitation - had 1 dose last month.

Intervention Recommendations for Problem Behaviors

1. Alexis will benefit from social skills training, especially about respecting the wishes of others for a quiet environment. She will learn an appropriate volume for listening to music, and to respect the request of others to turn it down when it is too loud.

2. Alexis will benefit from assertiveness training. This will allow her to express her feelings to others in an appropriate way rather than keeping it to herself or acting out inappropriately to express her feelings.

3. Alexis will need a daily schedule of activities. Allow Alexis to schedule preferred activities along with her daily routine. This will provide a structured environment for her.

4. When the radio is too loud, Alexis should be prompted to turn it down. If it is not turned down, the radio should be shut off (not removed). If she tantrums, staff should ignore the behavior. When the tantrum stops and she is quiet, she may turn the radio back on at an appropriate volume.

5. We recommend tracking symptoms of schizophrenia. There are currently no signs of this disease and it would be beneficial to know the extent to which symptoms are present each month.

6. Depending on the data collected from the schizophrenia checklist, she may be able to be weaned from her antipsychotic and antidepressant meds, and possibly even the amantadine. Her symptoms of self-stimulation (talking to herself, etc.) are most likely related to her mental retardation. More information from the institution would help determine a course to take for maintaining or slowing discontinuing her medications. This would be advantageous, since she has cerebral palsy and does not need an antipsychotic-induced motor disorder on top of that.

7. Because she has excess cerumen in her right ear, it should be irrigated as needed. This could contribute to hearing problems.

8. If maintained on psychotropic medications, she should be monitored for symptoms of tardive dyskinesia (TD).

9. Discontinuing some of her medications may help with her weight. However, this process should be correlated to symptoms of schizophrenia as a primary goal for medication reduction and not weight loss.

10. Alexis needs a well balanced diet, physical activity, and limited access to sweets. The diet should have a high fiber content and adequate fluid to prevent constipation.

11. Alexis should see a dentist on a regular basis.

12. Her skin condition should be monitored frequently and treated when necessary. Her skin should be dried well during bathing routines.

13. Alexis needs a Hepatitis B vaccination.

14. Alexis should maintain strength, flexibility, range of motion in extremities especially left arm and leg. In addition to regular physical activity, continue PT in community.

VII. Implementing and Monitoring Care-Coordination Plans

Once the comprehensive care plan has been developed, the next step is to implement the plan. The activities of implementation are critical to move the plan from its written form to execution of the procedures that will have some impact on the quality of life of the consumer. Activities of implementation refer to the training involved in developing critical staff skills for managing problem behavior in the residential setting. This chapter will focus on training methods for adequate implementation of behavioral, psychiatric, and general health interventions.

Implementing Care-Coordination Plans

A competency refers to an individual's demonstrated knowledge, skills, or abilities performed to a specific standard. The first step in implementing care-coordination plans is to identify the specific competencies they need to demonstrate at completion of training. These skills are typically outlined in behavior support plans and are linked to the behavioral procedures. The second step is to determine the specific behaviors that make up the skill being trained. These specific behaviors are often taught in a step-by-step fashion and are logically sequential of actions in completing the competency. The third step in staff development is to select the appropriate training activities that allow the staff to demonstrate their competency. This may involve activities like lectures, discussion groups, video presentations, role-plays between two staff, and modeling of the skill by a professional.

A variety of methods are often used in training staff to competently carry out a comprehensive plan. It is clear that trainers sometimes have a preference for one method of teaching over another, but it should be emphasized that what makes a teaching method effective is the variety of methods employed. Each person learns in slightly different ways, so multiple learning opportunities will allow for a better understanding of the tasks being required of him/her. Ideally, each trainer should get to know and master several training methods, in order to identify the most suitable of these for each area of competency. For example, more complex behavioral strategies may require role-plays or modeling, while simple tasks such as greeting a consumer in the morning can be explained in a lecture-style meeting.

However, trainers should not assume that the complexity of a competency is indicative of the teaching style used. It is of utmost importance to measure the performance of the competency after training has occurred. The method most often used for assessment in competency-based programs is criterion-referenced evaluation. The criteria are the objectives established at the beginning of training and consist of the essential functions of the skill. To demonstrate a competency, participants are asked to engage in a simulation of a programmatic procedure. Simulations (i.e., role-plays) should either include a checklist that details the

specific behaviors or some type of behavioral rating scale. If a checklist is used, then evaluating the competency simply consists of checking off the behaviors that are correctly exhibited when the participant performs the skill. The extent the staff correctly executes the skill, he/she has demonstrated competency. It is up to the trainer to decide what level of competency staff should be able to perform the skill. Most often, the staff will have to perform the skill in its entirety at 100% accuracy on the initial training. The trainer will also have to decide how many times a staff should perform the skill in its entirety at the defined level of accuracy. Typically, a staff may be required to demonstrate the skill on three separate occasions to ensure he/she has learned the skill. If competency cannot be achieved, the trainer should re-evaluate the teaching method used in the initial training sequence. It may be that more diverse methods of teaching are necessary. For example, if lecture-style teaching did not allow the staff to sufficiently acquire the skill (as demonstrated in criterion-based evaluation), then the trainer may want to try modeling or role-plays.

The CIP used three methods for teaching required skills of staff (and sometimes of the consumer him/herself). First, the trainer would go over the problem to be addressed, the rationale for the procedure to use to overcome the problem, and then describe the procedure. Questions were then asked of the staff about the procedures described to identify what was understood and what was not. If something about the procedure was not understood, further explanation was provided. The next step, depending on the complexity of the skill, involved modeling by CIP staff. The CIP staff would first demonstrate the correct way to implement the skill, and then demonstrate an incorrect way to implement the skill. The CIP staff then randomly performed either a correct way of implementing the skill or an incorrect way of implementing the skill. Staff were required to identify which vignette was accurate and which was not. The third method used, depending on complexity and whether or not the first two methods did not work, included role-plays between residential staff and the CIP staff. The trainer provided feedback to the staff on each sequence of steps necessary to complete the skill. Once staff demonstrated competency (i.e., 100% over three occasions), they were considered trained.

There were some circumstances in which the above CIP training model was not effective. Occasionally, a consumer moving into the community was identified with little time for training. Thus, the CIP staff provided an initial lecture-style training to make staff aware of the procedures. The CIP staff then proceeded to provide direct, in-home feedback when the situations arose that the care coordination plan was to be implemented. This is very similar to the role-play teaching method in that feedback was provided as the skill was being used. In some ways, using the actual people involved in the day-to-day setting, including the consumer, is a much better teaching opportunity than using people who do not share the same characteristics as those in the setting. In these circumstances, criteria-based evaluation only required staff competently

demonstrate the skill at 80% accuracy (80% accuracy is a typical “maintenance” target for a skill when demonstrating that skill in a live situation).

Another important factor involved in implementing care-coordination plans involves training responsible agency personnel to provide essential training on the plan. This model is often called the “train-the-trainer” model. Once the agency trainer has been trained to criteria, he/she is often responsible for making sure adequately trained staff is in the home of the consumer. It is important for on-going training and dialogue to occur between the original trainer and the agency trainer. Once the agency trainer has provided initial instructions to the direct care provider, the original trainer should follow up to insure competency of the skill being required of the direct care provider. Agency trainers are often at a disadvantage when it comes to providing on-the-spot training to direct care providers. He/she is sometimes faced with a staff shortage, so quick placement of staff becomes a rule rather than an exception. Thus, some of the essential components of a care coordination plan may be inadvertently overlooked. If the original trainer does not follow up with training, a phenomenon called “observer drift” occurs. Observer drift is when a plan that has been implemented is no longer being run the way it was intended to be run. Thus, any problems with the care coordination plan cannot be linked to occurrences of problem behaviors. More importantly, problem behavior may be exacerbated because the original plan is not being followed.

A final important factor when implementing care-coordination plans involves training as many staff per opportunity as possible. The more staff that can be identified to provide adequate care for the consumer, the better the quality of life is for that consumer. Furthermore, direct care providers can share stories about their experiences and provide insight about why a plan will or will not work. Additionally, “seasoned” direct care providers are a valuable source for teaching new staff, especially if they are familiar with the consumer before training begins. Fragmented teaching of skills to transient direct care providers is the least effective way of insuring proper care of the consumer.

There are many things a trainer must consider before implementing a care-coordination plan. The interventions outlined in the plan must be broken down into specific behaviors the staff will be required to demonstrate. Those skills should be taught using a variety of methods to insure staff understand and can demonstrate the skill. Some level of accuracy should be determined as an objective measure of competency. And, finally, on-going training should be part of the implementation process. Not only is observer drift a real threat to treatment integrity, but a trainer must be aware of problems like staff turnover, poorly motivated staff, and life changes of the consumer.

Monitoring Care-Coordination Plans

After the care-coordination interventions are developed and implemented, the focus should shift to monitoring activities within the plan. The purpose for monitoring is to assure that implementation occurs as it has been planned. Monitoring allows assessment of the established treatment outcomes, staff compliance with the programmed interventions, and the possible need for changes to the plan. It is not uncommon for accuracy of staff skills to decrease somewhat once the plan is implemented. The act of monitoring determines the extent to which the plan is becoming a routine part of care in the agency, and the degree of accuracy needed to accomplish the treatment objectives.

Monitoring general health. The role of the care-coordination team is not fixed or determined by a defined set of tasks. Care-coordination is an active process guided by the behavioral, psychiatric, and general health status of the consumer. As people with dual diagnoses age, there are a number of medical conditions that require vigilance and screening. They are: Type 2 diabetes, coronary artery disease, hypertension, hyperthyroidism, hypothyroidism, dyslipidemia, osteoarthritis, rheumatoid arthritis, Parkinson's disease. Screening exams and procedures to rule out breast, cervical, skin, lung, colon, and prostate cancer are important to overall health. When new symptoms or problem behavior appear, the first step must be a medical evaluation to rule out any medical problems. This would include a physical examination and possibly laboratory tests and/or x-rays. It is important to convey to the general health provider any new medications either prescribed or over the counter that the patient may be on, as side effects may be the source of the symptom. Bowel and menstrual records are important to establish baseline data. Becoming familiar with the person's baseline behavior, their response to stimuli and the environment, and their usual responses to pain and discomfort will help to identify and diagnose medical problems. How often a medical professional sees a person with dual diagnoses will depend on the severity of symptoms and problem behavior. Generally, consumers should be seen by a general health practitioner for a physical examination at least once per year. The more intense the symptoms, the more often a general health provider will want to see the person. In the CIP, a general health provider was available for each appointment between the behavior analyst, psychiatrist, and clinic coordinator. Although this may be a lofty goal for most professional agencies, it allowed any symptoms that were surfacing to be addressed.

Monitoring psychiatric health. In addition to medical care, care-coordination plans may involve any combination of counseling, pharmacological treatment, education, habilitation and environmental interventions. The most common treatment practice for a psychiatrist is the prescription of psychotropic medications that target symptoms of specific disorders. Monitoring medication regimens requires adjustments of doses to the consumer's needs, minimizing the doses (and sometimes eliminating) of medication, and minimizing

“polypharmacy.” Polypharmacy is the act of prescribing multiple medications to treat symptoms, including medications from the same class of drugs. A psychiatrist will monitor unwarranted side effects of taking medication, such as diabetes, obesity, or activation of psychotic symptoms.

During a psychiatric appointment, a psychiatrist will look for signs of improvement in the symptoms being treated with medication. There will be a review of records about any changes in the consumer’s life, any problems with behavior, or any activation of diagnostic symptoms. A similar format to psychiatric assessment is followed during the monitoring phase. At the end of the consultation, the psychiatrist will make a decision to either hold the medication dosage the same, reduce or increase the medication, or add another medication targeting another diagnosis. How quickly a consumer is requested to return for consultation depends on the severity of medical, psychiatric, and/or behavioral symptoms presented, and on any changes in medication administration. If it is determined that medication changes are needed, a psychiatrist will typically want to see the consumer within 2-3 weeks. If rapid medication changes are needed because of persistent deterioration of behavior or other symptoms, weekly visits may be necessary. If no changes in medication have occurred, visits are often extended to once per month. In some cases, a consumer may be doing well on a minimum dosage of medication and can be seen every 3 months.

How often a psychiatrist sees a consumer is congruent with his/her psychiatric stability. This is determined not only by interviewing the consumer, but by interviews with careproviders and/or other professionals. Psychiatrists find graphic displays of problem behavior and targeted psychiatric symptoms beneficial. The graphs not only provide visual detail about the symptoms themselves, but also about the efficacy of medication administration. Discussing the environmental precipitants to problems behavior with a behavior analyst is often necessary to make logical treatment decisions about medication. If it is determined through dialogue with the behavior analyst that the problems being experienced are related to environmental circumstances, a psychiatrist will often defer to the behavior analyst to make changes to the environment. If environmental changes do not alleviate the problem, medication changes may be warranted.

Monitoring behavior plans. In most cases, one monthly on-site visit may be appropriate to ensure adequate implementation of the plan. However, on-site visits occur much more often than monthly when the person’s problem behavior is volatile, when staff turnover is high, when initially implementing a plan, or when frequent visits are otherwise necessary to address complicated behavioral procedures. If targeted behavioral outcomes are not occurring at an acceptable pace, revision of the plan should be considered. Input from the general health provider and psychiatrist are crucial when the behavior support plan is not working. Problems stemming from medical complications or psychotropic medication administration may be playing a role in the behavioral deterioration. In

this case, home visits may occur weekly rather than monthly. It may be that the behavior plan remains in place as it is written until a systematic change in medical care or psychiatric care has occurred. If any changes are made to the general health or psychiatric components of the care-coordination plan, an immediate change in problem behavior may occur. Thus, a change in the behavior plan was not warranted. However, if general health and/or psychiatric problems are addressed and no changes occurred in the problem behavior, the behavior plan must be changed.

When behavior change outcomes have been achieved, preparation of a behavior maintenance plan is appropriate. This will require meeting with the residential agency administration, government oversight agencies, and the COS to discover what resources are necessary to support the person. The maintenance plan focuses on long-term behavioral support without intense behavioral consultation by a behavior analyst. The behavior analyst may begin fading consultation to twice per month, then once per month, then a follow up consultation every 3 months for up to a year to ensure the maintenance plan is effective.

Behavioral services may not be necessary after a long period of time without behavioral disruptions. However, a psychiatrist and/or general health provider may still request a behavior analyst's expertise during consultation with a consumer. Although intensive behavioral interventions may not be warranted, behavior-analytic techniques, such as graphic displays of problem behavior and/or symptoms, may be. This technology allows for the immediate detection of successful outcomes and/or deterioration of the consumer's behavior.

Summary of Implementing and Monitoring Care-Coordination Plans

As objectives in the care of the consumer are achieved, new objectives may be established. It is only through proper implementation of a care-coordination plan that those objectives can be achieved. Similarly, any deleterious effects of a plan can only be identified if the plan is carried out in a competent manner. Effective and frequent monitoring of the effectiveness of the plan not only ensures the plan is implemented competently, but also allows professionals to decide whether or not to continue the current objectives set out in the plan. It may be that services need to be systematically redirected in a more therapeutic direction. However, despite the best efforts of careproviders and clinicians, there are times a person reaches a critical state. In these cases, it may be necessary to prepare a crisis plan that circumvents behaviors which are detrimental to the consumer's health and well-being.

VIII. Managing Crises

All service providers are responsible for ensuring changes in behavior are evaluated and treated. This may involve making arrangements with a general health provider to rule out medical problems. Similarly, a person with dual diagnoses may have recurrent psychiatric symptoms that need to be addressed by a psychiatrist and/or psychologist. Finally, a behavior analyst may have to rule out environmental causes in the behavior. However, there are also times when a person may need more intense, facility-based care that cannot be adequately provided in the home. In these cases, psychiatric admission may be warranted. The purpose of this chapter is to provide a framework under which the above professionals attempt to address crisis situations with facility-based professionals.

Many times, a behavior analyst will identify the potential for psychiatric relapse and/or severe problem behavior during a functional behavior assessment. Thus, steps are usually taken within the context of a behavior support plan to minimize the possibility for a crisis situation to occur. Steps will also be taken in a behavior support plan to address what to do in the case of a crisis. This involves working with people in the mental health field, the COS, and those familiar with psychiatric admission policies.

The COS should develop environments that are responsive to the needs of people with dual diagnoses. Both proactive and reactive strategies should be considered in designing support environments that minimize the possibility of a breakdown in supports. Initially, all attempts should be made to design an environment that supports a meaningful lifestyle. This may involve fostering significant relationships with family, friends or other careproviders. As mentioned previously throughout this manual, it is very important to help the consumer develop useful communication styles to express wants and needs. Furthermore, an active daily schedule full of routines and preferred activities provides teaching opportunities that encourage independent living. Once a stable environment is developed that fosters a meaningful lifestyle, careproviders are better equipped to recognize events that may lead to problem behavior or mood changes. By recognizing how the environment influences moment-to-moment changes in behavior and/or mood changes, careproviders can develop more flexible methods for accommodating the consumer's ability to cope with the environment. For example, careproviders may reduce demands placed on a person or provide choices of activities.

Careproviders may begin to recognize general health problems or environmental stressors that influence problem behavior and change the environment accordingly. However, proactive strategies for problem behavior may sometimes break down. In these cases, a crisis plan should include reactive strategies that outline how to minimize harm to the consumer and others. A behavior analyst, in collaboration with the COS, should provide instruction

regarding how careproviders should respond to problem behaviors. This may include who to contact, what crisis intervention or restraint techniques to use, how to interact with the person in crisis, and the information to collect about the circumstances surrounding the crisis. Table 12 displays the critical components of a crisis plan.

Table 12. Components of a Crisis Plan

1) Description of events that lead up to changes in problem behavior.
2) Description of what problem behavior looks like in a crisis.
3) Appropriate careprovider response to changes in problem behavior.
4) Information about when to request assistance in managing problem behavior.
5) Contact information for assistance and the type of assistance the contact person offers.
6) Mobile Crisis Team information for when assistance is maximized and problem behavior intensifies.
7) Description of timelines for calling assistance and what to document

When the events leading up to a change in problem behavior occur, careproviders will typically have explicit instructions about what to do to minimize the intensity of the behavior. The crisis plan will provide a guideline for when assistance should be called. The first assistance often comes from the residential administrative staff. The administration will provide additional careproviders to manage the situation, or provide other resources that may help alleviate the problem (e.g., relieve current careprovider in the crisis situation or make changes to staffing pattern). If the administrative staff is unable to resolve the issue, the next professional that is called is typically the behavior analyst. The behavior analyst will ask for information about what lead up to the problem behavior, who was involved, the careprovider response to the situation, and offer suggestions for alleviating the problem. The behavior analyst will also ask questions about the duration of the problem behavior, how often it was occurring, and if the behavior support plan was followed in detail. In some instances, the behavior analyst may have to provide some coaching or on-site assistance to the careproviders about how to accommodate appropriate behavior while minimizing inappropriate behavior.

In other instances, the behavior analyst may consult with other mental health professionals listed on the crisis plan. If the behavior analyst is unable to alleviate the environmental events leading up to problem behavior, the crisis situation may be closely related to psychiatric and/or general health symptoms the consumer may be experiencing. In these instances, the careproviders may be instructed to contact the Mobile Crisis Team to determine the necessity for

psychiatric admission. The Mobile Crisis Team serves the purpose of providing guidance to careproviders. The team assesses the situation, determines whether an on-site consultation is necessary, and makes recommendations. The team will review the crisis plan that is in place and determine if all the appropriate DMRS and clinical providers have been contacted and consulted about the situation.

It may be necessary for some consumers with severe problem behavior to be admitted to a mental health facility. The Mobile Crisis Team will make a decision about the necessity of hospitalization and contact the appropriate in-patient facility. Many facilities require documentation of the presenting problem and previous psychiatric history before admission. Table 13 provides an outline of the information needed in order to admit a person with dual diagnosis for in-patient treatment.

Table 13. Documentation Needed for In-Patient Psychiatric Hospitalization

1) Description of problem behavior and symptoms needing attention.
2) Description of actions taken to prevent hospitalization.
3) Contact information for administrators, support coordinator, legal guardians, behavior analyst, psychiatrist, and crisis prevention teams.
4) Documentation of personal items, Health Passport, history of general health examinations, and copies of support plans.
5) Identification of people who will assist and/or visit consumer in the facility.

During the temporary in-patient hospitalization, facility staff (e.g., psychiatrist, medical doctor, nurse, and social worker) attempt to stabilize any psychiatric issues that have emerged during the crisis. The goal is to address the medication regimen to rule out medication-induced psychiatric problems. Sometimes, new medications may be administered. Other times, medications may be removed. However, psychiatrists try not to disrupt the current treatment protocol unless the crisis implicates a change in psychiatric care. Medical evaluations are typically conducted in order to rule out health factors related to psychiatric crises. Psychological evaluations are sometimes helpful during this time to determine psychosocial factors related to the crisis situation. Once the psychiatric stability of the consumer is under control, the consumer will be released from care. Treatment facilities try to minimize the length of stay during admission so that the current community placement is not disrupted. During the hospital stay, the residential provider agency and the COS typically brainstorm solutions for minimizing future crisis situations.

It is important to contact the community psychiatrist when a crisis occurs. Not only does this provide the psychiatrist with an opportunity to learn more

about the psychiatric challenges of a person, it keeps him/her abreast of any changes in the treatment plan. A facility-based psychiatrist finds it helpful to discuss the current psychiatric diagnoses and treatment plan to insure continuity of care. This reduces overmedicating the person and unintentionally creating unwarranted medical side effects of medication. In most cases, the community psychiatrist understands the consumer well enough to provide some advice to the facility-based psychiatrist about what steps to take in treating the crisis. Additionally, the community psychiatrist is better prepared to receive the consumer once they are discharged from in-patient care when he/she knows what treatment changes occurred in the facility.

When a person is admitted for a crisis, the Intensive Consultation Team (ICT) is notified. The major function of the ICT is to assess the need for additional services that may prevent crises from occurring in the future. In addition to Mobile Crisis Teams responding to crisis situations, DMRS has formed consultation teams in each Regional Office. These teams develop a network to help prevent, manage and respond to behavioral crises. The ICT works with the behavior analyst, psychiatrist, and support coordinator to collaborate regarding resources they need to provide adequate care for the consumer. The ICT is also helpful for ensuring continuity of care when the person transitions from the in-patient facility to the community.

Facilitating community integration often involves a plan of action for handling crisis situations. Although the best option for minimizing crises is to provide proactive treatment, some severe problems require a responsive management team that can quickly respond to a crisis. A responsive network includes the residential providers, the COS, behavior analyst, psychiatrist, in-patient facility staff, Mobile Crisis, and the ICT. Communication between these entities is very important in order to provide adequate supports before hospitalization, during a crisis, and after a person is discharged from psychiatric care. Involvement of these entities ensures the best quality of care while minimizing the risk of harm to the person in crisis.

IX. Common Barriers to Effective Practice

The success of comprehensive approaches to treatment for people with dual diagnoses has been demonstrated across multiple problem behaviors and mental health needs (Gardner & Whalen, 1996). While developing a service model combining general health, psychiatry, and behavior analysis, the CIP experienced similar barriers that challenge many service providers in the mental health field. The goal of this chapter is to identify those common barriers and offer some practical suggestions for how to move service delivery forward with minimal interruption. A person's success living in a community setting often depends on how efficiently services meet his/her needs. Challenges such as funding, availability of trained professionals, and familial support sometimes threatens the stability of community placement and the person's quality of life.

One of the challenges faced by service providers is the age-old problem of limited resources, including monetary support. However, rather than address how limited budgets for supporting people with dual diagnoses from an administrative point of view, this chapter will address how limited budgets influence the quality of life and problem behavior of the consumer. During the transition process, decisions are made by the transition team about the type of residential supports, staffing patterns, daily activities, and other service needs of the person. The residential provider absorbs most of the moving costs associated with transition to a new home even though some of those funds are reimbursable. Moving costs may include purchasing furniture, paying a deposit on rental property, or buying special equipment that is not reimbursable. The balance left over after reimbursement is left for the consumer to pay back to the residential provider. Because the consumer may not have employment, and because Medicare funding is limited, money is often not available to the consumer after the monthly financial obligation to the residential agency is settled. This sets up a problem for the consumer for two reasons. First, if the person does not have personal funds to spend during the month, problem behavior may occur due to boredom or lack of freedom to engage in preferred community activities. Second, because the person with dual diagnoses often knows his/her funds are controlled by the residential provider, the person feels restricted in terms of making budget choices. Anecdotally, many consumers often feel they have no say in how their money is being spent. Sometimes, the consumer perceives the residential provider is stealing money even though this is clearly not the case.

In an ideal world, the costs of transition would be covered in advance by funding agencies to alleviate the stress caused between the residential provider and the consumer. However, it may be more practical to be creative about how reimbursing the residential agency occurs. For example, if the consumer is capable of participating in budgeting, he/she should be allowed to observe how to manage his/her funds. This includes knowing the expenses to pay and the money available for personal spending. Simply giving the person a set dollar amount every month limits autonomy in the sense that it can be perceived as an

allowance rather than personal funds. The second, and probably most important aspect of reducing tension related to funding, is to locate employment opportunities before the person moves into the community. Job coaches can do assessments and even begin training in a community work site while the person still resides in the mental health facility. This helps the person acclimate to the work environment and streamlines the transition process by minimizing stress related to moving to a new environment and being expected to work at the same time. After the person identifies an alternative source of income, funds reimbursable to the residential agency can be paid with minimum conflict. The person has more personal income to enjoy the things he/she likes to do.

Another barrier to successful community placement, though not common, is the closure of residential agencies providing services to the consumer. Reasons for closure may include administrative reasons, sanctions imposed for abuse or neglect of the consumer, or inability to maintain services due to funding. Regardless of the reason for closure, the consumer is affected in profound ways. When the residential provider no longer provides services, the consumer is essentially without a home. The COS then struggles to identify another residential provider agency in a timely manner and conduct another transition meeting to insure all the necessary services are still in place once the person moves to another agency. Disrupted living arrangements can make it difficult for the person with dual diagnoses to cope with a constantly changing environment.

The most important thing the ISC can do is minimize the stress related to moving by keeping the other service providers informed frequently about any residential changes. Closer monitoring of residential providers may also be necessary to identify early on when the provider is having difficulty maintaining its obligation to the consumer. The transition process to another residential provider can then start as soon as it is needed to avoid disruption in services. Impulsive service decisions can be avoided when the amount of time for finding appropriate services increases.

A related problem to residential closures is involving consumers in administrative issues. Management issues that arise within the residential agency should never be addressed in front of the consumer. There are many reasons to avoid addressing administrative issues in front of a consumer. For example, the consumer may misinterpret feedback from a supervisor to a direct careprovider as hostile. The consumer may then hold resentment toward the supervisor and/or direct careprovider. This sets the occasion for problem behavior to occur toward either of the residential staff. Another problem with addressing problems in front of the consumer is that it causes unnecessary stress. The consumer may feel anxious about helping the residential provider find solutions to deal with a problem. When the person is then left out of the decision-making process, he/she feels invalidated. Feeling invalidated may lead to problem behavior at a later time. The person may also feel anxious about a pending move, or that the agency no longer wants to support him/her.

The best way to manage administrative concerns is to address the careproviders in staff meetings. However, if staff meetings are not possible, written communication and/or verbal communication outside the consumer's home is the next best solution. If direct careproviders want to share feedback with the managerial staff, or vice versa, meeting times should be scheduled to address the issue. This provides a safer environment for the consumer.

Staff turnover is another problem that plagues most service providers. A high rate of staff turnover means residential providers have to provide ongoing training, which could cost a significant amount of money. Another problem with high staff turnover is the time involved in training staff that do not stay employed. Regardless of the reason for staff turnover, the consumer is constantly interacting with new people. The consumer must constantly cope with the attitudes, beliefs, and cultural differences between himself/herself and the direct careproviders. Furthermore, the more time and money a residential provider spends training new staff, the less involved the consumer is in the community. When the living environment is stable (e.g., consistent staff), the person is better able to predict his/her routines and schedules.

There are several ways to retain staff. For example, management can recognize direct careproviders for achieving some objective performance standard. This can include immediate feedback about performance or public recognition. If it can be afforded, management can develop a lottery system to pay a one-time monetary award for exemplary performance each month. For a given month, all staff who achieves a defined level of performance can put their name in a drawing for the monetary award. If management cannot afford a monetary award, they may be able to develop the same system using extra time off of duties as an incentive. Another way to retain staff includes proper training and feedback of the critical skills necessary to successfully complete the job requirement. The possibilities for retaining staff are endless. The most important thing is to provide the staff with the skills they need and to provide incentive for providing those skills.

A fifth barrier to community success is that some residential provider models may not be appropriate for some of the consumers. For example, a highly active, energetic, young consumer may like to go out into the community more often than an older consumer. If the staffing model is a companion model (i.e., one staff person conducts daily business with the consumers), the energetic consumer may not get to engage in many activities. Likewise, the older consumer may be forced to go out into the community against his/her wishes. Another problem is that crisis situations become difficult to manage. For example, the consumer may be at risk for harm if there is no careprovider available to assist them. To contrast, suppose a staffing model includes shift changes. That is, staff changes shifts every 8-10 hours. The disruption in staff change may provoke problem behavior for some people. Furthermore,

households requiring a considerable amount of staff communication may be disrupted during the shift change.

It is important to determine the needs of the consumer before assigning a staffing model. It is also important to provide on-going assessment about the appropriateness of the current staffing pattern. If using a companion model, the careprovider should only be assigned to one consumer. Additionally, a plan should be in place for how to handle idiosyncratic situations requiring additional careprovider support. If using a shift model, establish a seamless transition period for careproviders. For example, staggering the shift change between two careproviders by one-half hour sometimes may cut down on problems arising from tardiness of the incoming staff and also communication about daily events.

A barrier related to careprovider behavior is poor treatment integrity. The comprehensive plan of care may not be implemented exactly how it is supposed to be implemented in some circumstances. For example, poor implementation may range from improper use of behavioral strategies for reducing problem behavior to missing key medical appointments without rescheduling. The consequences of such actions can range anywhere from an escalation of problem behavior to deterioration of physical health. Two major reasons for poor treatment integrity include inadequate staff training and unmotivated personnel. Lack of knowledge of disabilities and/or personal attributes, including idiosyncratic treatment plans, can be attributed to poor staff training. When the careproviders are not given all of the training they need to work with a particular consumer, they are less likely to perform the treatment plan to a high degree of accuracy. Additionally, the lack of motivation on the part of a careprovider can be related to poor training and/or the lack of desire to perform at a high level of competence. The reasons for the lack of desire to perform at a high level of competence are endless, but some examples may include personal life circumstances that take precedence over work or being poorly paid to complete the job requirements.

The first solution for rectifying poor treatment integrity problems is to ensure careproviders receive ongoing training. The training they receive should include competency-based training, allowing them to demonstrate the required skills. Once it is determined they have the skills necessary, it is up to the immediate supervisor to ensure the treatment plan is implemented on a daily basis. This requires monitoring performance to identify the need for additional training or if there is a motivation problem preventing the plan from being implemented. If careproviders receiving ongoing training can demonstrate the skill but still not perform as prescribed in the treatment plan, administrative action should be taken in a timely manner. It is not always necessary to terminate the services of the careprovider for inadequate performance. There should be an adequate consideration of compensation for performance, the need for additional training, or if the match between the consumer and the careprovider is appropriate. Nonetheless, monitoring is a key component of careprovider

behavior. The more monitoring occurs, the more treatment plan integrity is likely to increase.

Poorly defined roles of the treatment team and COS contribute to barriers for service implementation. When it is unclear what responsibilities fall under the purview of a particular job title, it increases the probability tasks will not be completed. The reasons for this may be similar to those dealing with inadequate treatment integrity. That is, the members of the COS may be unwilling or poorly trained to complete the designated task. Another problem with poorly defined roles is the lack of accountability within the COS. When tasks are assigned and not completed, there is rarely a consequence in place to address the next steps in providing feedback for the poor performance.

One way to address the lack of accountability is to systematically define the roles of each member in a COS. This includes also describing a method for delegating responsibilities when circumstances arise that may dictate a COS member completing a task that would normally not fall under his/her purview. An objective way to settle issues of unaccountability is to develop a minimum performance standard for each COS member. The COS members should be evaluated on the objective measure on an annual basis to determine if he/she has met the minimum performance standard. The measure can be assessed by an administrative figure. However, this can also be completed by the COS in which the member provides services. There are advantages to using an objective measure to let the members of the COS evaluate one another. One advantage is that it minimizes personal conflict within the COS. This is accomplished by providing specific prompts for performance related to the job rather than personality differences between the COS members. Another advantage is that the COS is more familiar with the specific functions of its COS members for a particular consumer. After the assessment is completed, the decision to maintain the COS or change its members becomes a more systematic method to handling inadequate service delivery, rather than making changes that may or may not be in the best interest of the consumer.

One of the most troublesome barriers to service delivery is the limited choice-making decisions of the consumer. The COS members are often faced with balancing the need for autonomy and the consumer's inability to make treatment decisions in his/her best interest. However, one area that can improve dramatically is inclusion of the consumer in the day-to-day decisions we all make as autonomous citizens. All too often, people with dual diagnoses are presented with a situation that can be restrictive in this area. Although the person has a mental illness, many careproviders might believe the person is capable of making logical decisions at any given moment. A lack of understanding of the dynamics of MI may lead the careprovider to overlook some of the symptoms of poor decision-making inherent in many of the MI diagnoses. The careprovider may even engage in confrontational dialogues with the consumer as if there were no mental health problems. On the other hand, careproviders may not provide

enough room to make decisions because the consumer has some level of mental retardation. The careprovider may believe a person with mental retardation is incapable of making any decisions and, thus, make the decisions for them. Unfortunately, someone with mental illness who feels he/she does not have the ability to make decisions may engage in problem behavior more intensely than the careprovider expects.

Although there is no clear solution currently for dealing with the intricacies of dual diagnoses and choice-making, there are some general guidelines that should be emphasized. First, the careproviders should understand what the terminology surrounding dual diagnoses means. For example, careproviders should know what the levels of mental retardation are and how each level affects choice-making behavior. Careproviders should also know the symptoms of the mental illness and how these symptoms may affect choices. Second, there should be clear guidelines for each consumer about what inappropriate decisions look like. Once those are established, all other decisions should be left to the consumer until it becomes apparent he/she is incapable of making those decisions. Third, the best way to distinguish effective choice-making behavior is to allow the consumer to participate in the decision-making process. The CIP used a problem-solving technique with each consumer served to establish a systematic way of determining whether or not the consumer could make effective choices for his/her particular situation. This is a skill that is often lacking in the dual diagnosis population and should be emphasized during treatment. If careproviders can be adequately trained to perform problem-solving competently with the consumer on a day-to-day basis, they are teaching the consumer to make healthy choices that are in his/her best interest. This also eliminates unfairly (or unknowingly) limiting the consumer's ability to make his/her own decisions.

Many of the barriers listed above can be challenging for most service providers. Some providers may experience multiple problems; others may experience only a few. By no means is every provider faced with the same circumstances. Solutions were provided for each barrier providers commonly face when serving people with dual diagnoses. However, in the spirit of promoting autonomy, it is up to the individual providers to ensure they are capable of serving their consumer. Administrative entities within the State provide the necessary mechanisms for providers to ensure they meet minimum provider standards. However, administration within each provider service should take a more active role in monitoring treatment integrity. Measurement of treatment integrity, combined with operationalized definitions of the roles and responsibilities for a given service, increase the likelihood the person with dual diagnoses will develop and maintain a quality life in the community.

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Appendix A

VANDERBILT KENNEDY CENTER BEHAVIOR ANALYSIS CLINIC
FUNCTIONAL ASSESSMENT INTERVIEW

Name _____ Age ____ Sex M F

Interviewer _____ Respondent _____

Date of Interview _____

PREFERRED ACTIVITY ASSESSMENT

1. What does the person like to do during his or her spare time?

2. What are the person's interests? How does he or she express these interests?

3. How often does the person engage in activities that they like? How long do they last?

4. Are there any activities the person would like to try?

5. Circle the activities in which the person enjoys doing:

Walking	Computer games	Reading
Jogging	Video games	Listen to radio
Boating	Table/card games	Play music
Riding a bike	Puzzles	Watch movies
Swimming	Crafts/art	Go to movies
Exercising	Instrument	Watch TV
Basketball	Collecting	Talk on phone
Baseball	Fly a kite	Meet people
Football	Build a model	Visit people
Golf	Bake/cook	Hiking
Skating	Woodworking	Gardening
Fishing	Library	Playing pool
Concerts	_____	_____

DESCRIPTION OF PROBLEM BEHAVIOR

1. What are the problem behaviors of concern? Describe the topography, frequency, duration, and severity of the behaviors.

Frequency Code	***Duration Code***	***Severity Code***
(1) Once per month (2) 2 or more times/ month (3) 2 or more times/ week (4) 2 or more times/ day (5) 2 or more times/ hour	(1) < 1 minute (2) 1-5 minutes (3) 6-10 minutes (4) 11-30 minutes (5) > 30 minutes	(1) Low- minor disruption, temporary redness, etc. (2) Medium- requires staff intervention, bruising, abrasions, etc. (3) High- requires restraint, hospitalization, crisis intervention

Problem Behavior	Frequency	Duration	Severity
1. _____	1 2 3 4 5	1 2 3 4 5	1 2 3
2. _____	1 2 3 4 5	1 2 3 4 5	1 2 3
3. _____	1 2 3 4 5	1 2 3 4 5	1 2 3
4. _____	1 2 3 4 5	1 2 3 4 5	1 2 3
5. _____	1 2 3 4 5	1 2 3 4 5	1 2 3

2. Which problem behaviors occur at the same time, in response to the same situation, or in a predicable sequence?

HEALTH NEEDS THAT MAY INFLUENCE PROBLEM BEHAVIOR

1. List all medications which the person takes, including how often and what dosage.

2. Are there any side effects that have been noted for any of the medications the person is taking?

3. List any health conditions the person may have (e.g., constipation, asthma, allergies, seizures, acid reflux, or headaches).

4. Describe the sleep pattern of the person.

5. What types of food does the person eat and what are his/her eating routines? Does the person refuse to eat certain foods or at certain times?

6. Is the person sensitive to particular lights, sounds, or smells? Does the person dislike being touched?

SITUATIONAL EVENTS THAT MAY INFLUENCE PROBLEM BEHAVIOR

1. To what extent are activities predictable for the person (e.g., When to get up, eat dinner, or shower, etc.)?

2. How often does the person choose activities or rewards? In what areas does the person make choices (e.g., food, clothing, social companions, or leisure activities)?

3. How many people are in the setting where the behaviors occur? Is there a difference in the number of people or noise level that predicts problem behavior?

4. Does the problem behavior reliably occur in the presence of certain people? Are the people adequately trained to provide services or handle conflicts with the person?

5. Are there activities or tasks that the person does that are boring or unpleasant?

6. Are there activities or tasks that the person does that are difficult?

7. Will the problem behavior occur if the person is alone?

8. Does the problem behavior occur at a particular time of day? When is it least likely to occur?

9. Is there a particular setting in which the problem behavior is more likely to occur? Where is it least likely to occur?

10. Is the problem behavior most likely to occur if the person is being ignored?

11. Is the problem behavior most likely to occur if you interrupt an activity?

12. Is the problem behavior most likely to occur during transitions from one activity to another?

13. Is the problem behavior most likely to occur when there is a delay in getting what he/she wants?

CONSEQUENCES OF BEHAVIOR

(Describe what you think happens after the behavior occurs)

Behavior	Positive Reinforcers	Negative Reinforcers
_____		
_____		
_____		
_____		
_____		

Appendix B

VANDERBILT KENNEDY CENTER BEHAVIOR ANALYSIS CLINIC
COMPREHENSIVE REPORT

Date:

Introduction

Presenting Behavioral Challenges

Behavioral Assessment

Hypothesized Function(s) of problem behavior

Psychiatric Assessment

Current Diagnoses

Current Psychotropic Medications

Past Psychiatric history

Allergies

Mental Status Exam

Health Assessment

Medications

Labs

Physical Examination

Recommendations

Problem Behavior

General Health

Signatures

Michael E. May, M.S. BCBA
Clinic Coordinator

John Jackson, MD
Psychiatrist

Craig H. Kennedy, Ph.D. BCBA
Clinic Director

Angela Becker, RN MSN
Family Nurse Practitioner