

Chapter 7

Applications of CTNA Methods

This chapter will discuss current and potential future applications of CTNA methods. Seven potential areas will be discussed, namely general clinical practice, rehabilitation, teaching, future research, cultural issues, children and adolescents, and the elderly.

General Clinical Practice

CTNA methods can be used in general clinical practice whenever neuropsychological assessment is warranted. The areas that CTNA methods are potentially effective include diagnostic clarification, treatment initiation, and development of treatment goals.

CTNA methods are well suited as a consultation method to provide diagnostic clarification for patients and their providers. Cognitive problems are common experiences with individuals who experience mild-to-severe emotional problems such as depression, anxiety, and others. For example, individuals with anxiety disorders often experience lapses in attention, concentration, and memory. Similarly, individuals with depression often have difficulty making decisions, paying attention, and remembering things. Even when the patient's mood or anxiety state has stabilized, there may be residual cognitive complaints that patients misinterpret as organic in nature. Depression and anxiety are often misinterpreted as symptoms of attention-deficit disorder or early Alzheimer's disease (AD). It is easy for patients to become confused about these disorders especially because of recent media attention to pharmacological therapies for adult attention-deficit disorder and early mild cognitive impairment as a precursor to AD. In conjunction with a detailed clinical history, CTNA methods can provide insight and clarification as to the nature of cognitive problems and diagnostic possibilities. Consider the following example:

A man in his early 50s diagnosed with bipolar I disorder and alcohol dependence had been able to maintain abstinence and a euthymic mood with the help of his treatment team. As time progressed, the man and his family noticed cognitive problems of forgetfulness, psychomotor slowing, inattentiveness, and a general

lethargy that was not previously present. The man and his family began to worry that he had become “stupid” or brain damaged due to his years of alcohol use and psychiatric illness, and this created stress in the family and despondency in the patient. With the help of their clinician, they initiated neuropsychological testing. In the clinical history, there was no evidence of traumatic brain injury (TBI), stroke, or other major medical complaints. The test results showed the patient to be above average in general intelligence but in the impaired range on tests of information processing, attention, and concentration, which were affecting some of his immediate and delayed memory abilities. He also showed difficulty organizing his thoughts, which further contributed to his memory difficulties. His cognitive profile was most consistent with research and experience suggesting cognitive problems in euthymic patients with bipolar disorder. This information was given to the patient and the clinician in a team meeting. The feedback was reframed to the patient in the following way, “Sometimes with bipolar disorder, once the mood and behavior are under control, patients often notice their mind is out of control.” This conceptualization made sense to the patient, and he and his family inquired about strategies for coping with cognitive problems.

In other situations, CTNA methods can be used to clarify methods and goals for treatment. For example, a young man suffering from a long history of psychiatric illness had maintained stability from mood symptoms for a significant period of time but was now experiencing anxiety that was creating functional problems. During the initial interview for anxiety treatment, the clinician began asking the patient open-ended questions designed to encourage the patient to elaborate on psychological conflicts. It became evident very early that these open-ended questions were making the patient highly anxious, and he began to “shut down” in the interview. On a hunch, the clinician asked the patient if he would be willing to take some brief neuropsychological tests, to which the patient agreed. The tests revealed that the patient had deficits in executive functioning, particularly working memory, mental flexibility, and abstract reasoning. It was clear that the patient had difficulty forming his own mental conceptualizations and became overwhelmed by his own thoughts, a symptom of his currently stabilized psychiatric condition. This likely explained reasons for his anxiety symptoms. The patient performed well in highly directive and structured situations, but became anxious and decompensated in less-structured and ambiguous situations. Therefore, an open-ended, nondirective type of therapy would be detrimental to the patient, so the clinician began a more structured and directive cognitive behavioral treatment. The patient became more relaxed and engaged and found the structured, written exercise of CBT to be very helpful in conceptualizing his own thought processes. The treatment was framed for the patient and his family as “teaching the patient to do on paper what he has difficulty doing in his mind.”

As a final example, consider the case of a 25-year-old woman who was referred for a neuropsychological evaluation by her psychiatrist. This highly educated woman had a history of psychiatric hospitalizations secondary to depression and suicidal ideation. Despite her level of education, she was working as a custodian

in a local hotel. She complained that her memory was poor, wondered if she had ADHD, and noted that she had made it through school due only to hard work and not to her intellect and that she was not generally cut out for a more complex or demanding occupation. Imagine her surprise when her WAIS-III scores revealed a full-scale IQ score of 146! Furthermore, scores on measures of executive functioning, attention, processing speed, memory, and organization were all similarly excellent. A comprehensive personality assessment also indicated that her mood issues were largely contained at the time of testing. The feedback focused on her continuing struggles with self-esteem, anxiety, and worries of decompensating into her prior psychiatric state. Bolstered by this feedback, she began to look for more intellectually satisfying work, considered graduate school, and even joined MENSA. In cases like this, the absence of neuropsychological findings can be as powerful and meaningful as a comprehensive picture of an evolving neurological condition.

These examples show how CTNA methods can be used in general clinical practice as either a consultation tool or a therapy initiator. Consequently, CTNA methods fit well into rehabilitation methods.

Rehabilitation Methods

Methods in rehabilitation of brain-injured patients date back to World War I, with the advent of improved neurosurgical techniques leading to increases in survival rates of head-injured servicemen (Boake, 1989). However, interest in TBI rehabilitation and research grew rapidly around 1979 coinciding with the foundation of the former National Head Injury Foundation, now the Brain Injury Association of America (BIAA) (Gordon et al., 2006). The proliferation of TBI rehabilitation research led to two comprehensive reviews. The first review concluded that there was a need for basic research in translating animal models to human clinical practice models, the need to better understand TBI recovery dynamics, the need for rehabilitation effectiveness evaluations and the factors affecting outcome, and the need to develop innovative service delivery models (NIH, 1999). A second review in 2005 provided evidence for cognitive rehabilitation's effectiveness with brain-injured patients such that the BIAA adopted a position paper in 2006, indicating that "Cognitive rehabilitation is central to the treatment and recovery of individuals with brain injury" (Katz, Ashley, O'Shanick, & Connors, 2006). One of the recommendations of the BIAA is as follows:

"Cognitive rehabilitation treatment strategies and goals, and the duration, scope, intensity, and internal of treatment should be determined based on appropriate diagnosis and prognosis, the individual functional needs of the person with brain injury and reasonable expectations of continued progress with treatment." (p. 15).

We believe that CTNA can be a valuable contribution to cognitive rehabilitation in the following areas: enhancing awareness of patients and their families of the need for cognitive rehabilitation and improving adherence to rehabilitation interventions.

Enhancing awareness. One challenge in cognitive rehabilitation is the ability to help patients recognize the need for an intervention in the first place. In this case, we are referring more to a psychological denial rather than a neurologically based lack of awareness such as anosognosia, although the two may be difficult to separate. Denial can be described as an emotional/subconscious process that interferes with intellectual awareness of a disability (Crosson et al., 1989). There is evidence that the level of acceptance or denial can have an impact on brain injury rehabilitation participation (Fleming & Strong, 1995; Katz et al., 2002; Schönberger, Humle, Zeeman, & Teasdale, 2006). CTNA's patient-centered and educational methods may be effective in providing patients and/or families in a way that does not lead to defensiveness and resistance and thus allows the patient to hear information that may be discrepant from their self-concept.

Improving adherence to treatment recommendations: CTNA methods are well suited for addressing treatment adherence issues. The person-centered style of administering CTNA serves to lower patient resistance and foster the development of a collaborative relationship. This, accompanied with objective, non-judgmental feedback about cognitive strengths and weakness, and the effort to apply these skills to patient's daily life, may facilitate the development of insight and move the patient from a precontemplative state (no problem is perceived) to a contemplative state (the likelihood of a problem is considered). Pegg et al. (2005) illustrated the use of medical and neuropsychological information in TBI patients. Patients who received medical and neuropsychological information in a person-centered style of interaction experienced a sense of empowerment over their rehabilitative efforts and essentially became more informed and effective consumers of cognitive rehabilitation. In addition, CTNA methods fit well into Cognitive Rehabilitation Principles as cited in Prigatano (1999).

Principle 1. The clinician must begin with patient's subjective or phenomenological experience to reduce frustrations and confusion in order to engage them in the rehabilitative process.

Principle 4. Neuropsychological rehabilitation helps patients observe their behavior and thereby teaches them about the direct and indirect effects of brain injury.

Principle 13. The rehabilitation of patients with higher cerebral deficits requires both scientific and phenomenological approaches. Both are necessary to maximize recovery and adaptation to the effects of brain injury.

CTNA can be incorporated as a treatment entry intervention to rehabilitation methods in order to facilitate a therapeutic alliance, provide objective and non-judgmental information about cognitive strengths and weaknesses to patients and their families, and empower consumers to become active participants in the development of rehabilitative strategies.

Teaching

CTNA methods are teachable to students who wish to learn the “art and science” of neuropsychological assessment and thus become “human-science” practitioners. The two primary disciplines are psychological assessment methods and person-centered communication style.

Students should learn the basics of psychological testing and measurement of personality and cognition. This includes an understanding of relevant readings in psychological and neuropsychological assessment. Students should have exposure to intelligence and memory test batteries in addition to self-report and performance-based personality measures. The important skill to be learned is the applicability of individual assessments to real-world functioning. Students should know not only what cognitive or personality traits a test assesses but also how those traits operate in the real world. Therefore, students should be able to state cognitive and personality traits in real-world terms that apply to daily life and functioning.

There is no standard way for teaching students a person-centered style of interacting with patients. Such instruction is generally left to the individual teacher based on his or her own knowledge and competence (see Handler & Hilsenroth, 1998 for an excellent review). Miller and Rollnick (1991, 2002) have developed and explained person-centered methods in a concrete and teachable format with Motivational Interviewing (MI). They illustrated the process of an MI session, provided an explicit method for giving feedback in a person-centered style, and developed adherence scales for assessing clinician competence in using MI skills. Thus, MI methods can be effective in teaching students to be person-centered practitioners. In addition, MI followers have written extensively on different training methods (see MI website, www.motivationalinterview.org).

Future Research

CTNA methods were originally developed with mentally ill substance abusers (MISA) patients. However, CTNA methods can generalize to a wide range of patients in many different settings. The study at the University of Pittsburgh School of Medicine in Addiction Medicine services examined the effects of the CTNA on patients diagnosed with substance dependence and a depressive disorder. This study examined the effectiveness of the CTNA in enhancing adherence rates, with patients entering an intensive partial hospital treatment program. The main outcome was the number of group sessions patients attend compared to the number of sessions they are required to attend. In addition, we examined patients' responses to the CTNA on a case-by-case basis to assess responsiveness to, and satisfaction with, CTNA. It is hoped that this information will help in the continual development and refinement of the intervention in order to optimize its usefulness and effectiveness.

Future studies can examine CTNA's effectiveness on these and other variables with different populations. For example, one area of recent interest has been the development of interventions for families of patients diagnosed with AD. Recent studies have shown that family mental health and functioning can have an impact on the quality of care patients with AD receive. It would be interesting to examine if the provision of objective and understandable cognitive feedback presented in a person-centered manner can have an impact on family members' understanding of the disorder, facilitate insight and understanding of the patient's functional strengths and weaknesses, and provide direction and hope as to what kind of interventions and resources are available to help families cope with the progressive decline of the disease.

Current research underway at the University of Santa Barbara by Dr. Steven Smith examines the use of neuropsychological test feedback to children and their families. For children diagnosed with attention-deficit disorder, learning disabilities, or other problems compromising cognitive ability, objective and nonjudgmental feedback may facilitate insight and understanding on the part of the patient and family members and provide direction for treatment.

Recent research has examined the effects of cognitive rehabilitation on patients diagnosed with a severe mental illness such as schizophrenia or bipolar disorder. Studies have reported the effects of cognitive deficits in hindering treatment planning and implementation. Future research can examine the use of CTNA methods as a consult to patients, families, and providers to provide insight and direction for more applicable treatment planning that considers patient's functional abilities. Thus, cognitive remediation can be more focused, and the patient can feel empowered as an active collaborator of the treatment process.

These are just some examples of areas where CTNA methods can be used in clinical practice, teaching, and research. It is our hope that professionals will consider adopting CTNA methods for the benefit of their patients. We also hope that instructors of psychological and neuropsychological testing will consider adopting these methods for their students. In doing so, we hope to disseminate a more collaborative and person-centered neuropsychological assessment process that enlists patients as partners in enhancing their health and well-being and empowers them to take charge of health decisions. Dr. Ronald Ruff has called for neuropsychologists to become "caretakers of cognitive health." We would expand upon that and call upon neuropsychologists to empower patients to become caretakers of their *own* cognitive health. We believe CTNA methods are a potentially powerful tool in the fulfillment of this goal.

CTNA and Cultural Issues

The field of neuropsychology has made strides in developing more culturally sensitive neuropsychological assessment and interpretation methods; however, there remains much to be done (see Fletcher-Janzen, Strickland, &

Reynolds, 2000, Handbook of Cross Cultural Neuropsychology for an excellent resource). The challenge is to develop a perspective in clinical neuropsychology that emphasizes understanding an individual's behavior in the larger context of their social milieu. This requires an understanding of brain-behavior relationships (and how they may have changed, given a specific experience, change, trauma, or other event), in the context of an individual's culture.

The strides that have been made in developing a culturally sensitive neuropsychology include norm-based scoring that integrates the influence of different ethnic groups, the literature on the impact of culture on cognition, and a general increased sensitivity by practitioners, teachers, and researchers as to the influence of social and contextual factors on brain-behavior relationships. Despite these strides, different ethnic groups continue to be suspicious of the assessment and testing process due to concerns of over-pathologizing, misinterpretation of symptoms, inaccurate attributions of symptom presentation and behavior, and misdiagnosis (Fletcher-Janzen et al., 2000). Such concerns often lead to poor clinician-patient rapport and a general environment that is unsupportive, defensive, and potentially hostile. Such an environment is easily created when a practitioner follows an information-gathering model of assessment where information is hidden from patients. Culturally diverse patients, who already feel suspicious of health care, testing, and assessment, are likely to become increasingly suspicious when an "alien" neuropsychological procedure is administered with little or no input from the patient.

CTNA methods are well suited for creating a more open, supportive, and culturally sensitive environment for the following reasons.

CTNA methods emphasize an open sharing of results. As opposed to the information-gathering model, where the emphasis is on *secrecy*, CTNA emphasizes *transparency* on the part of the clinician. This openness can reduce patient's feeling that there is a hidden agenda on the part of the professional. Many individuals from different cultural groups have knowledge and experience that professionals use tests to harm versus to help. CTNA makes the agenda of the assessment and feedback clear and open. In this way, the patient understands fully what is happening and what interventions or plans may arise from the testing and assessment process. An important part of this process is an open sharing and explanation of norm-based scoring and the strengths and weaknesses of neuropsychological tests. CTNA methods emphasize an open discussion about the strengths and weaknesses of norm-based scoring and how data may or may not apply to an individual's experience. This leads to the second reason why CTNA methods help create a culturally sensitive environment.

CTNA emphasizes the patient's perception of how their performance applies to their daily life. In CTNA, the clinician does not provide information in a "top-down" manner, where a patient passively receives knowledge from the clinician. CTNA emphasizes a two-way dialogue, reflected in the "Elicit-Provide-Elicit" method where clinicians seek to understand the meaning of knowledge and data

for a patient. Such a dialogue could potentially segue into a conversation about social and cultural issues. Consider the following example with an African-American male patient in his early 40s, who dropped out of school in the 10th grade.

Clinician: Ok, Robert, this next is called the “Block Design” test. This is the test where I gave you a bunch of blocks with some sides red and some sides white and asked you to make patterns with them. Do you remember that test?

Patient: Oh yeah, I remember that test. It was frustrating as hell (laughs).

Clinician: Ok, can you tell me more about that?

Patient: Yeah, I mean the first ones were ok, but as it went on I couldn’t figure out what was going on. I’ve never been interested in puzzles so I didn’t think I’d do all that well.

Clinician: It sounds like as soon as *you saw what the test was about* you didn’t think you were going to do very well.

Patient: Yeah, no way. Nothing I did seemed to fit. How did I do?

Clinician: Well, if you look at this graph here, you can see that your score fell in the 15th percentile. We would say that score falls in the low average range.

Patient: So that means I’m dumb, right?

Clinician: No, it means you fell in the low average range for *this* test. What I’d like to know is what did you see yourself having to do to work on this test?

Patient: (Thinking). I mean I had to guess the patterns, right? I had to figure out what goes where, like putting a puzzle together.

Clinician: Right, it’s very much like putting a puzzle together. For this test you have to be able to look at the design, figure out the pattern in your mind, and then look at the blocks and piece them together in the right way. People who are good at this test are usually good at figuring out patterns to things, like an engineer. They can look at different parts of something and then put them together to make a whole picture.

Patient: (Nodding) Ok, yeah, we’ll that’s something I’ve never been good at. I mean, in school I remember trying to do puzzles, or things my teacher wanted me to do with my hands, and I just never got it. A lot of my friends were pretty good at mechanics and stuff like that but none of it made any sense to me.

Clinician: So this is something you’ve seen in yourself for a long time?

Patient: Yeah, so let me ask you something. What is this test about for black people and white people? I mean like...if a white person did the same way on this test, what would that mean as opposed to me doing how I did?

Clinician: Just so I’m clear. Are you asking if I would interpret this differently for you versus a white person?

Patient: Yeah, yeah that’s it.

- Clinician:** That's a real good question. In my experience there are a couple different ways of thinking about it. In the past, some people have thought that blacks are not as smart as whites so that's why they don't do as well. But now we know that a lot of it boils down to opportunities. Whites tend to have more opportunities than blacks do and so they have better educational experiences and then do better on these types of tests. But I guess I'm wondering what you think about that and what you think is right?
- Patient:** (Leaning forward, showing greater interest) Man, I wanted to do good in school early on. In fact I was really good at things like poems, art, drawing and stuff like that. But where I come from, you get into that stuff and people think you're a punk and that doesn't help you on the street one bit. I mean, my dad was never around and my aunt raised me because my mom was usually doing her thing. My cousins would tell me that my education was out there not in school.
- Clinician:** So early on you really wanted to learn these things but it just wasn't supported where you came from because you needed to survive?
- Patient:** Yeah man, I know I'm not stupid. No offense but you'd get cut where I come from and I flow through it like water. (Clinician and patient laugh)
- Clinician:** I have no doubt, but can we talk some more about this? (Patient nods in agreement).

This is an example of how CTNA methods can create an open dialogue that explores the meaning of a test score for a patient without prematurely diagnosing and labeling them. In addition, the method emphasizes egalitarianism, where the clinician and patient are on equal footing. Here the patient can tell the clinician what the score means, instead of the clinician dictating to the patient. In this way, CTNA methods can create a bridge of understanding between cultures.

CTNA with Children, Adolescents, and Families

Clinical experience suggests that one of the challenges in helping family members whose child has been cognitively compromised, due to either injury or illness, is to be able to provide help and resources to the family while maintaining a positive working alliance. When a family has a child who has been injured, is not developing normally, or is behaving in some aberrant manner, the family looks to professionals for help and support, yet there is an air of suspicion at the same time. Families are very sensitive to feeling blamed, ashamed, and generally feeling as if their child's difficulties are their fault in some way, in addition to the helplessness they feel in regard to their inability to help their child. What they don't need is to be made to feel blamed and talked down to in a way that further disempowers them and lowers their motivation in wanting to accept help from

professionals. Consider the following example of a family who has been struggling with their son's behavior problems and was referred for a neuropsychological evaluation by their pediatrician.

- Clinician:** Good afternoon Mr. and Mrs. Jones, I'm going to give you some feedback about how Jimmy did on the tests he took, are you ready to hear all this?
- Mr. Jones:** (After looking at Mrs. Jones, who is nervous and wringing her hands). Yes, I suppose so; can you tell us exactly what kind of information we'll be learning here?
- Clinician:** Of course. We're going to help Jimmy. We're going to get him on the right track so that things can be better for all of you. (Mr. and Mrs. Jones smile slightly, but still appear worried).
- Clinician:** Ok, so let's proceed. Basically Jimmy falls in the category of attention deficit disorder, predominantly hyperactive type. He displays the type of dis-inhibited behavior in addition to various executive, sequencing, and discrete attention abnormalities that I would expect in a child with such problems. His behavior during testing was quite poor. He displayed various impulsive and off tasks behaviors that made the session significantly longer than normally expected. Thus, I can see why the schools are having such problems with him. I would suggest immediately having him evaluated for medication and begin some mobile therapy and therapeutic staff support services.
- Mrs. Jones:** (Beginning to cry but looking confused). Wait, how did you come up with all that? You can tell all that from the tests?
- Mr. Jones:** (Irritated). What exactly did he do that tells you this? I can understand him being impulsive and off task, but you said "executive" what does that mean?
- Clinician:** Really that's all semantics. The point being that his profile is very consistent with the diagnosis and I want to discuss recommendations. Now what we know is
- Mr. Jones:** (Interrupting). Wait a minute! You're telling us he has this disorder! I've read about this. Don't these kids basically become screwed up, using drugs, killing their parents and things like that?
- Mrs. Jones:** (Crying). No, I've heard they grow out of it. He'll grow out of it right? (Mr. and Mrs. Jones start talking back and forth).
- Clinician:** I'm really rather taking a back that the two of you would be surprised by this. The rating scales you filled out were clearly significantly above the normal range so you must have had an indication that something was going on. Mr. Jones, didn't you tell the interviewer that you had some hyperactivity growing up? ADHD has a high level of genetic transmission so. . . .
- Mr. Jones:** So this is my fault he's this way? I have an M.B.A and a successful business, how can you compare me to Jimmy?

Clinician: Look, there are many good educational resources for you. There's an organization called CHADD that can help you understand this better. I think you just need some time to let this sink in. (Mr. and Mrs. Jones look at the table, despondent).

This interaction reflects a traditional information-gathering type of feedback model. The clinician talks to the family in an authoritative, top-down manner that leaves the family confused and disempowered and increases their resistance. CTNA methods enlist the family as an important source of information for understanding what a child may be going through. Consider an alternative way in which part of this interaction might progress.

Clinician: Mr. and Mrs. Jones, I'd like to share some observations with you about Jimmy in regards to how he did on the test and also some behaviors I saw, does that sound ok to you.

Mrs. Jones: Yes absolutely.

Clinician: Great. In regards to his test performance, one thing I saw was that Jimmy had a real hard time with tests that measure skills of attention and working memory. By attention, I mean that he just did not seem to be able to focus for any length of time, maybe a minute or two at most. Working memory is basically the ability to hold ideas in his mind and do something with the information. For example when I read him a series of numbers and letters that he had to put in the right order, he became frustrated and irritated very quickly. In fact he became irritated on many tests which would lead him to start moving around, getting out of his seat, acting rather silly, and inappropriately playing with the test materials. I'm wondering if any of this sounds familiar to you?

Mrs. Jones: (Both Mr. and Mrs. Jones are nodding). Oh god yes! When I try to talk to him, he's all over the place. I tell him a few simple things I want him to do and then he just looks at me and goes "huh". I mean, our daughter does that once in awhile, but for him it's constant. I can't keep him in one place.

Mr. Jones: Or keep him focused. I tried to take him fishing one time, I figured maybe I wasn't spending enough time with him and that might help. I tried to show him some simple things about baiting a hook. Dammit, he was all over the place! He couldn't listen even for a second! Finally, I thought, well maybe he just needs to try it himself. Well, stupid me! That's how he got that hook in his finger! I tried to hold his hand to get it out, because it wasn't that deep. But he kept fighting me, screaming, and flailing around that he hit his hand on the ground and shoved the hook deeper. Fortunately Children's Hospital wasn't too far away, but the drive there was hell.

- Clinician:** Wow! Obviously, we're seeing similar things. Also, I hear how frustrating it's been and it also sounds like you've been really wracking your brains trying to help him but nothing seems to work.
- Mrs. Jones:** Oh, god I feel horrible more than half the time (crying). Do you have any idea what's going on?
- Clinician:** Everything that I'm seeing on the tests and in the descriptions of Jimmy's behavior from you and the school seems to be consistent with Attention Deficit Disorder. Do you understand what that is and what it means?
- Mr. Jones:** I've read some things. What is it you're seeing that tells you that?
- Clinician:** Based on the markers we use, inability to pay attention, acting impulsively, unable to organize himself like at school and home (family nods), and the fact that this happens in many different areas of his life, are all consistent with this diagnosis, especially given that there appears to be no other real good explanation for any of these things. How do the two of you feel about what I'm saying?
- Mr. Jones:** I mean, everything your saying sounds right. You've captured Jimmy pretty well. But what can we do about this?
- Clinician:** Yes, let's move to that. What I'd like to do is talk to you about a number of options for helping Jimmy. The important thing is that we find a plan that fits for the both of you and that Jimmy can work with. How does that sound? (Both Mr. and Mrs. Jones nodding)

In this scenario, the clinician takes time to attend to the families' feelings, talks to them in a collaborative way using down-to-earth language instead of jargon, and emphasizes the importance of an individualized care plan that considers their needs and the needs of their child. Such an approach potentially empowers a family and motivates them to want to work with the clinician and find different ameliorative strategies.

The importance of CTNA as a tool to empower families cannot be understated. In dealing with schools, organizations, hospitals, and other systems, families often feel disempowered, overwhelmed, and at the mercy of the more knowledgeable and powerful system advocates. CTNA arms families with knowledge and skills in order to face such challenges and become an advocate for their child. Families can then feel like informed and empowered consumers of health-care knowledge that allows them to take charge of their own and their child's health and well-being.

CTNA with Elderly Patients and Their Families

Although there are many reasons elderly patients may be referred for a neuropsychological assessment, most are referred for being assessed for a diagnosis of dementia or a mood disorder (Brown & Wiggins, 2005). This is consistent with

my own (Dr. Gorske's) observations in clinical practice. The majority of patients I see are referred to determine a depression versus dementia diagnosis, to assess the aftereffects of a stroke, or to provide differential diagnosis of vascular cognitive impairment or a progressive dementia disorder. With patients whose cognition has not been severely compromised to the degree where comprehension, insight, and ability to process verbal information are impaired, I find the provision of feedback to be helpful to them and particularly to their loved ones. The patient-centered and collaborative feedback process appears to be helpful in ways already discussed throughout his book. The question remains, what role does a collaborative feedback method have for patients who have been severely cognitively compromised due to dementia, a severe mood disorder, or other neurological conditions where individual feedback is not appropriate and family involvement is essential? We believe that the importance of CTNA for family members of elderly patients lies in the ability to maintain a strong collaborative, working alliance that enlists family members as treatment team members and lowers their resistance to hearing difficult and possibly discrepant information.

Neuropsychologists are in a unique position to provide comprehensive and competent services to family members of patients who have been cognitively compromised. The challenge is for the clinician to broaden their clinical role as one who is knowledgeable in brain-behavior relationships and to understand the needs of family systems. With elderly patients, an event such as a diagnosis of dementia or depression creates imbalance in family systems to a point where longstanding family roles have now been shaken. The family homeostatic system has changed because the previously held role by the *patient* has now changed due to the event leading to cognitive difficulties. Family members therefore present to professionals with a myriad of assumptions, concerns, and emotional reactions that have the potential to influence the course of treatment planning and interventions (for reviews of these issues, see Storandt & VandenBos, 2005).

As a result of these issues, the neuropsychologists' clinical skills are of primary importance in providing feedback to elderly patients and their families for two reasons: the need to maintain a positive and collaborative relationship with family members and when providing feedback regarding the outcome of the evaluation. Maintaining a positive rapport with the family is essential in order to create an atmosphere of collaboration and empowerment that enlists family members as active treatment team members. As previously stated in this book, such an atmosphere is more likely to lead to successful development, implementation, and follow through with treatment recommendations.

The second issue, providing outcome information, refers to the often difficult situations neuropsychologists find themselves when providing test feedback information. A neuropsychologist may find themselves being bearers of bad news, which requires them to take the role of a supportive psychotherapist who tends to family members' thoughts and feelings about

the information provided. In addition, this requires an understanding of family system's issues and dynamics. Another part of providing outcome information is the fact that neuropsychological assessment information may not provide definitive information about diagnosis or reasons for cognitive changes in a family member. This places the neuropsychologist in an awkward position to justify and clarify the strengths and weaknesses of neuropsychological assessment information (for an excellent in-depth review of these issues, see *Neuropsychological Evaluation of the Older Adult: A Clinician's Guidebook*, by Joanne Green).

CTNA methods are well suited for helping neuropsychologists with these issues identified above. CTNA provides a framework for interacting with family members in a collaborative way that addresses and deals with their emotions and potential resistance. Additionally, CTNA offers a framework for discussing the strengths and limits of neuropsychological assessment information yet emphasizes its importance in describing patient's cognitive and behavioral functioning. Consider the following example.

An 87-year-old woman is hospitalized for severe depression. She has had bouts of depression in the past (the last being over 20 years ago) and was tried on various medications and ultimately received electroconvulsive therapy (ECT), which appeared to have modestly positive effects. In order to assess her ability to receive ECT again, she undergoes numerous medical evaluations in addition to a neuropsychological consult to rule out any evidence of a more severe cognitive problem. The neuropsychologist and other treatment team members meet with the family and the patient to discuss the results. There are three family members present: the patient's oldest son and his wife and the patient's youngest daughter (all adults in their late 50s). The results of the neuropsychological examination are most consistent with a major mood disorder, and there is no evidence of a dementia process.

Clinician: Welcome to everyone. I'm glad you all were able to make this meeting. What I wanted to do was discuss the results of the neuropsychological evaluation your mother took so we can move on with her treatment. How does that sound to everyone?

Daughter: Ok wait. I'd like to know why she had to do this. They've been poking and prodding her all week and nobody seems to be doing anything. All that seems to happen is test after test but nothing else, so I'd like for you to explain what you're testing and what good is going to come of it.

Son: Maybe if you'd give the man a chance he might (Son and daughter stare at each other).

Wife: Ok let's let the doctor explain. Go ahead doctor.

Clinician: Ok, well basically your mother is not demented. She is actually pretty sharp mentally. So really I think we can talk about beginning. . .

- Daughter:** Sharp mentally? Have you been observing her? Does she look “sharp mentally” to you? (Points at the patient who is slouched in her chair, looking at the floor, silent)
- Clinician:** Ok what I’m trying to say is that while she is certainly very depressed, there is no evidence of more severe cognitive problems that would keep her from beginning ECT treatment.
- Son:** Ok but doctor, with all due respect, she is not “with it”. This is a woman who was seeing things only two weeks ago and couldn’t remember the names of my children. So I’m a little confused by you saying that she doesn’t have severe cognitive problems. (The patient looks up as if wanting to say something)
- Clinician:** (Maintains eye contact with the son to other family members exclusion) But there are many things that can explain that. So far all tests indicate that she does not have dementia. What I’m trying to say is that. . . .
- Daughter:** Then what does she have? I’m tired of people saying what she doesn’t have and explaining the water! So why can’t she lick this. Why are we here again? Mom, what’s going on with you?! You’ve been doing this for over 30 years!
- Patient:** (After a pause and shrugging her shoulders) I don’t know.

This brief example illustrates some of the challenges in providing information to family members. The goal of feedback in regard to elderly patients and their families is to provide information about diagnosis and education about a disorder and possible interventions. The difficulty here is the family context influencing the nature of the feedback session (Knight, 2005). The family context refers to the history, dynamics, and emotions family members bring into a feedback session. If these are not addressed and processed, there is the risk of increased resistance by family members, which leads to a breakdown in communication and collaboration. The clinician may be forced to “take over the session” or withdraw. Taking over the session may lead family members to feel disempowered and lead to passive resistance. Withdrawing may lead to the family members completely taking over the feedback session, and no useful knowledge is disseminated or gained.

CTNA methods challenge the clinician to play two primary roles. In the first role, the clinician is a knowledgeable neuropsychologist who is an expert in brain–behavior relationships and the meaning of those relationships to a person’s life and functioning. The second role is one of collaborator and, in this case, an empathic group manager. The clinician uses the person-centered methods of CTNA to create an open yet structured therapeutic milieu that respects each person’s perceptions and opinions, and uses that information for the benefit of the patient and the family in developing intervention strategies. Here’s how the above scenario might look in such an atmosphere.

- Clinician:** [Provides family members a copy of the neuropsychological test results] Good afternoon everyone. I want to thank all of you for coming here today. My name is Dr. John Smith. I'm the neuropsychologist in this treatment setting. I would like to ask if everyone knows what this meeting is for and what we're going to accomplish? [Introductory statement assessing family members' understanding of the meeting]
- Son:** Well, to help mom I figured.
- Daughter:** No clue.
- Clinician:** Ok, Nancy (the patient), how about you? Do you know why we're meeting? [Assessing patient's comprehension of the meeting's purpose]
- Patient:** Well, I guess it's about all those tests I took with you?
- Clinician:** That's right. (Addressing family members) I'm a neuropsychologist. What that means is that I test different mental skills people have, like the ability to pay attention, remember things, solve problems, and other types of skills. I test people to assess how strong or weak they are in these areas and can often answer different questions based on the results. [Provides a framework for the session by describing neuropsychological assessment tasks]
- Son:** Like what kind of questions?
- Clinician:** Well, in this case, I've been asked to assess if there are any severe cognitive problems that might keep her from undergoing ECT treatments. So what I would like to do is tell you what I've found. How does that sound to everyone. [Provides a specific focus for the session and assesses family perceptions with an open-ended question]
- Daughter:** So I want to know why she's having these episodes again after all these years. Can you tell me that?
- Clinician:** That's a really good question, but I want to be clear and up front that I wasn't asked to determine that, nor do I believe that I could at this time. So no, I'm afraid I won't be able to answer that. Do you think that will affect how you see our work today? [Affirms family members' need for information; provides direct information and then assesses family members' readiness to proceed]
- Daughter:** (Sighing). Then it's just another damn meeting! When are these going to end? Nobody can seem to answer that!
- Clinician:** (Attending to the daughter but then to the entire family) I hear this has been a long road for everyone and that it's been frustrating not to receive the answers you're looking for. [Reflective response]
- Son:** Yes it has. While I don't agree with Terry (the daughter) that this is waste of time, it is hard not feeling like any progress has been made.
- Daughter:** I didn't say it was a waste of time, don't put words in my mouth! I've been the one taking care of her when things get bad, so I have a right to know what's going on!

- Clinician:** It's been hard on you, Terry, feeling like you've had to do a lot yourself with little support [Reflective statement] (Terry starts to tear up; clinician addresses the patient) Nancy, what are your hopes for our meeting today? [Enlisting the patient as an important session contributor]
- Patient:** I want to get better. Will this help me get better?
- Clinician:** What it will do, is tell us whether you are a good candidate for a treatment we hope will help you get better. How does that sound to you? [Provides information; elicits patient response]
- Patient:** Ok, I'm ready.
- Clinician:** For these tests what I look for are markers suggesting a severe problem with Nancy's mental skills. What I found is that she scored low on tests I would expect for someone with severe depression. However she scored well in the average range on tests that might suggest more serious cognitive problems. For example, her score on this test called Digit Symbol was quite low because she performed slowly. People with depression often perform very slowly on different tests. However, on a test of memory, where she had to remember a list of words, she actually did quite well for her age. So what that suggests is that she can remember information, she just isn't very fast taking it all in. How does that fit for what others are seeing? [Provides information in layman's terms; elicits family reactions]
- Son:** So her memory is ok but she isn't very quick?
- Clinician:** Yes, that's a good way of putting it. [Affirms family members' efforts to understand]
- Son:** (Looking at his wife) Yeah, I can see where that fits. Sometimes she seems really forgetful, but other times she remembers stuff I'm surprised she remembers.
- Clinician:** Can you give an example? [Elicits further information]
- Wife:** I know one. About two weeks before she had that really bad episode, she was able to tell my brother every detail about our children's activities that I told her over the phone just a few days prior. But when she was in the midst of her episode, she didn't remember that I'd brought her some casserole earlier in the day.
- Clinician:** So when she's feeling ok, she seems to remember things pretty well. But when she's depressed, her memory is worse. [Summarizes what the family members said in a concise manner]
- Daughter:** So that means she's not demented?
- Clinician:** What has been described is more consistent with severe depression than dementia. When an older person is more depressed, they can often look like they're demented but in fact that's not the case. Nancy, what do you think about what we're saying? [Provides information; elicits patient reaction]
- Patient:** Oh, I know what's going on a lot better than you all think I do.

In this brief example, the clinician did a number of things consistent with CTNA methods. First, the clinician established a supportive, collaborative, yet focused framework for the session by describing the purpose while ensuring that family members understand the goals so that any inaccurate assumptions can be addressed early. Second, the clinician reflects and empathizes with family members' perceptions, particularly the family member who was most distressed. Feeling heard and understood, the family member may be more amenable to information that is hard to hear. Third, the clinician frequently summarizes what has been said so that there is no misunderstanding and elicits the family members' reactions to the summary. Fourth, the clinician attends to all members of the family instead of focusing on just one. This way, all family members feel a part of the process. Finally, the clinician enlists the patient as an active participant. In this way the patient feels empowered to be an important part of their own treatment.

CTNA methods can provide a bridge between the provision of diagnostic and educational information and address the dynamics of a patient's family so that they can feel supported and empowered and are active collaborators in the feedback and treatment recommendation process. Clinical experience providing these types of feedback sessions has shown that family members will often confide in the clinician about the need for their own help and support. This provides a segue toward recommendations for family support and care. CTNA methods ensure that information is provided in an open and collaborative way so that participants remain open to the process and the information for their and their loved one's benefit.