A Closer Look

Substance Abuse and TBI
An Interview with John Corrigan, Ph.D.

Maureen McGrath, A.C.S.W., C.C.M.

John D. Corrigan, Ph.D. is a professor in the Department of Physical Medicine and Rehabilitation and Director of the Division of Rehabilitation Psychology at Ohio State University. He is the Principal Investigator for the Ohio Regional Traumatic Brain Injury Model System, a multi-center, longitudinal research program funded by the National Institute on Disability and Rehabilitation Research. Dr. Corrigan directs the "TBI Network," a program providing community-based services for substance abuse after brain injury. He serves on the Advisory Committee to the National Center on Injury Prevention and Control at the Centers for Disease Control and Prevention. He is a former member of the board of directors of the Commission on Accreditation of Rehabilitation Facilities (CARF) and the Brain Injury Association of America. He serves on several editorial boards of journals in brain injury rehabilitation and has received local and national awards for his service and research in the field, including the Brain Injury Association of America's William Fields Caveness Award.

Dr. Corrigan has contributed to the development of the web-site ***Synapshots***, which is a joint project of the Charlotte Institute of Rehabilitation in Charlotte, North Carolina and the Ohio Valley Center for Brain Injury Prevention and Rehabilitation at Ohio State University in Columbus, Ohio. The web-site **http://www.synapshots.org** provides detailed information on the topic of substance abuse and TBI with regard to incidence, problems associated with substance use and TBI, and treatment.

MAUREEN:
Your work in the area of substance abuse and TBI is really some of the most comprehensive there is in the field. Your website ***http://www.synapshots.org*** *addresses a number of general questions on the topic. This website is a great resource for those whose lives are affected by TBI, whether professionally or personally.*

DR. CORRIGAN:
Right. That's why we developed the website. We did it for the same audience you're writing for [*Premier Outlook*]. Our audience includes a mixture of consumers, as well as professionals who might use the resource as a starting point.

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MAUREEN:
Dr. Corrigan, in your experience in the area of brain injury and substance abuse, what treatment methods or intervention methods have you found to be the most effective?

DR. CORRIGAN:
Let's reframe that just a little. What do I think are the active ingredients in somebody addressing a substance abuse problem after traumatic brain injury? Let me answer that question, then we will come back to the one you asked.

I think that, like most behavioral health issues, including substance abuse treatment, at the core is still developing a therapeutic alliance. I think it is important

Definition of Terms		
Substance Use:	**Substance Abuse:**	**Substance Dependence:**
Substance use includes the consumption of alcohol, other non-prescribed drugs, or the misuse of prescribed medications. Due to the effects on the brain, any substance use following brain injury should be avoided, even if it does not lead to intoxication.	**Any of the following consequences recurring within the last few months:** **- Failure to fulfill major obligations at home, work, or school;** **- Engaging in potentially hazardous behavior;** **- Legal problems; or** **- Social or interpersonal problems.**	**More severe manifestations of abuse, including signs of physiologic dependence.**

Note. From **http://www.ohiovalley.org/abuse/abusescrn.html#terms** by the Ohio Valley Center for Brain Injury Prevention and Rehabilitation. Exerpts reprinted with permission of the Ohio Valley Center.

to form a good therapeutic relationship with an individual. And making sure the individual is informed is one way to ensure that the relationship develops. This is the way you can get good information from that person and establish the mutual goal of behavior change, and in this case, addressing the substance abuse problem. That is the single, most important, active ingredient. If you asked me that question about psychotherapy, by the way, I would have given the same answer. I think research supports that for most theories of intervention, the majority of the answers are in the therapeutic relationship, not in the technique.

Now different professionals use different techniques that they have confidence in, that have some structure to the approach, and that's good; and there is a little bit of variance in that too. But, I believe these techniques are more for the professional than for the person receiving services.

I think that the therapeutic relationship is number one, but there are some special issues regarding the therapeutic relationship in this population. I think that because of some of the executive function issues and frontal lobe syndrome, it can be more difficult to form a therapeutic relationship with some persons with brain injury, than some other populations. Persons with brain injury are certainly not the only difficult group to work with, but I think it can be one of them. When you refer to a professional who has a wide variety of people in their caseload and maybe doesn't have a lot of experience with traumatic brain injury, I think our folks run a higher risk of not forming a good relationship with the therapist and then, dropping out of treatment. For example, if the therapist hasn't had a lot of experience with persons with brain injury, they may misinterpret what is being said. The therapeutic relationship may not develop in the same way.

I think our folks form relationships more slowly, including therapeutic relationships. It takes a counselor who has more time and experience to form the relationship. Do you have to have counselors who work with individuals with traumatic brain injury exclusively? No, having some knowledge, some basic factual information about traumatic brain injuries, knowing what to expect, or at least having some information about what to expect; I think these factors are all part of increasing the likelihood that the therapeutic relationship will develop.

MAUREEN:
Some time ago, I think maybe about ten years ago, there was a modified AA (Alcoholics Anonymous) approach… the Twelve Step…?

DR. CORRIGAN:
Oh, you mean the Modified Twelve Step Program for persons with traumatic brain injuries?

MAUREEN:
Yes. What do you think about that whole approach?

DR. CORRIGAN:
The Twelve Step or the Modified Twelve Step?

MAUREEN:
Both.

DR. CORRIGAN:
Well, we think that the Twelve Step Program is one of the resources out there that, in the right circumstances, definitely should be used. However, you may have to overcome a person's preconceptions and stigma to get them to use Alcoholics Anonymous. Some individuals have a tough time with the "higher power" aspect and large group format of AA.

But now, in this day and age, when there are choices and you don't just have to use AA, we're practical. The main point is getting individuals into the treatment that works for them. On the other hand, there are folks who were in AA before their injury and it makes perfect sense for them to restart. Certainly, you get the occasional person who is so permanently agnostic that they are just going to be turned off by the "higher power" aspects of AA. Well then, don't use it, but there are other people it works really well for.

MAUREEN:
It's certainly convenient, since most communities have AA groups.

DR. CORRIGAN:
Sure, but it is important that you just don't say "AA" and send them to a group. If you are going to use AA as a referral, and I would say this about substance abuse resources in general, you have a responsibility to know something about the program. You should know whether this person is going to fit in. There are many faces to AA groups and some are confrontational, and that kind of group, we don't recommend. Some groups absolutely don't want you on any medication. Well, if you had somebody on an antidepressant or somebody on even seizure prophylaxis, they could be confronted in that group – in a group that is against all medications. So that is something we would steer away from. You need to know your AA groups, your AA referral source, that's for sure.

MAUREEN:
When a person joins an AA group, don't they get a counselor or "sponsor" who works with them?

DR. CORRIGAN:
Yes, and I think what's really important for folks with TBI is having good sponsors you can hook them up with as part of their AA experience. Again, taking the time to find some good sponsors that you can use in the circumstance are all part of a good referral. I also think you ought to know your other substance abuse resources, not just AA. Any referral needs to be researched for the appropriate fit.

The individual you are referring needs to know what to expect. This is usually a new idea for them, that they have a problem with alcohol or drugs, and they may be affected by the stigma about needing treatment. The more information you can give them about what to expect when they go, the better the referral and the treatment is going to turn out. For example, you let the individual know, "You will go to this agency and this is what will happen. They have a general intake process, you will meet someone initially and then you will be assigned a counselor." That's good information to know. Also, if you know that you're working with somebody who has a physical limitation, make sure that the facility you are referring him or her to is accessible. This is part of the process too.

On the flip side, as part of a good referral, we suggest that you let the agency you are referring to know something about the person you are referring. For example, if you are referring somebody who has a tendency to be loquacious [very talkative] and they just need to be redirected when it occurs, that would be good information for the folks at the agency to know. Prior information on both sides is part of a good referral.

MAUREEN:
One of the toughest issues in psychotherapy with persons who have traumatic brain injury has to do with memory and being able to process information. How do memory problems and processing limitations impact substance abuse treatment?

DR. CORRIGAN:
A lot of this is clinical, which at this point is not proven. I do believe that confrontation should be avoided. So, that is a clinical technique that should not be used in this population. That's clinical intuition, not research studies.

I also think that some of the more abstract clinical approaches are not effective either. I'm starting to think that some of the motivational interviewing type approaches, if the practitioner relies on too high a level of abstraction, might not be as accessible to persons with traumatic brain injuries. Of course, we know there is a tremendous spectrum of people with traumatic brain injuries, and there are some individuals who can handle and work with the abstract information. So, it's a gross generality, but if we are talking about somebody who has impaired cognitive function and it includes both their level of abstraction, as well as some of the frontal lobe issues, the more abstract approaches may not be the best choice.

The other thing is that, and we've seen this in the treatment of folks with both mental illness and substance abuse, sometimes it's not so much an issue of not using the technique but being able to adapt it. The single most important adaptation is individualizing. You cannot expect folks to go through at some predetermined rate of treatment. For

example, "okay by the third session having done these exercises, you will grasp this point. By the fifth session, having done this, you will be here." You have got to individualize the pace. You have to individualize the timing. I think you can take individualization that far and that you can also individualize the abstract level. This way you can take a cognitive behavioral technique or motivational interviewing and do it in a way that is beneficial to the individual.

According to Cognitive Dissonance Theory, there is a tendency for individuals to seek consistency among their cognitions (i.e., beliefs, opinions). When there is an inconsistency between attitudes or behaviors (dissonance), something must change to eliminate the dissonance. In the case of a discrepancy between attitudes and behavior, it is most likely that the attitude will change to accommodate the behavior.

Two factors affect the strength of the dissonance: the number of dissonant beliefs and the importance attached to each belief. There are three ways to eliminate dissonance: (1) reduce the importance of the dissonant beliefs, (2) add more consonant beliefs that outweigh the dissonant beliefs, or (3) change the dissonant beliefs so that they are no longer inconsistent.

Dissonance occurs most often in situations where an individual must choose between two incompatible beliefs or actions. The greatest dissonance is created when the two alternatives are equally attractive. Furthermore, attitude change is more likely in the direction of less incentive since this results in lower dissonance. In this respect, dissonance theory is contradictory to most behavioral theories, which would predict greater attitude change with increased incentive (i.e., reinforcement).

I've been considering how cognitive dissonance impacts brain injury and behavior change. I've always had a strong feeling that cognitive dissonance may underlie a lot of behavior change. What a lot of different therapeutic techniques are doing, one way or another, is capitalizing on cognitive dissonance; first, creating cognitive dissonance and then resolving it. I am beginning to wonder if some of our folks with more severe traumatic brain injuries don't experience cognitive dissonance in the same circumstances as the general population. So, if techniques rely on the assumption that the two populations experience and respond to cognitive dissonance in the same way and this is not so, this may be the reason these techniques aren't quite as effective.

Sometimes we have a person we are working with who is tremendously capable of what I call "compartmentalization." That is, they can hold two conflicting beliefs with great strength and not be bothered by it. For example, one might believe, "No, I shouldn't make outrageous comments to young women." Then hold another belief like, "Man, it's fun to make outrageous comments to young women." The person can hold both of those conflicting views and depending on which one you are tapping into at the moment, they can, with ease, endorse both viewpoints.

MAUREEN:
So, some of the core aspects of how therapy often works may not be applicable when working with persons with brain injury?

DR. CORRIGAN:
That's correct.

MAUREEN:
What suggestions do you have for helping those with cognitive difficulty benefit from the therapeutic process? Do you ever suggest homework or using educational materials?

DR. CORRIGAN:
Well, I use a lot of material. I use an eclectic approach and basically it's whatever it takes. I try out different things with different people.

We work with the individual and help them with residential, intensive outpatient, detox, women's programs, and whatever else is needed. So, we're staying involved with the individual, but part of our involvement is getting them into substance-abuse treatment and then consulting with that provider along the way. Of course, what we are using is the mainstream substance-abuse system. I still, big picture, believe that part of the brain injury community's agenda needs to be to make everyday substance-abuse treatment as accessible to people with traumatic brain injuries as possible. And I can go off on a tangent on that just in terms of numbers; we're never going to have a dedicated system for substance abuse and TBI, I mean economically. Incidence wise, there are far more people that need to be treated than there are folks who I think can be adequately treated in the existing substance-abuse system. The current treatment system needs to make some accommodations. And one is, they need to be knowledgeable about traumatic brain injuries. It needs to be one of the co-morbidities that substance-abuse providers across the board know about. It is in their population… it's in their group. If they're in the substance-abuse business, they are in the business of traumatic brain injury. We have a study here done with – it might have been from the website [**www.synapshots.org**] –119 folks representative of those in more intensive level treatment in a local, publicly funded, community-based, substance-abuse treatment program. Out of the 119, there were over 70% who had at least one traumatic brain injury with loss of consciousness in their life. Even more remarkable to me were some 35% who had had a moderate or severe traumatic brain injury. So, the substance-abuse system in this country needs to be able to treat folks with TBI; that's it!

Barriers to accessibility need to be dealt with. Physical accessibility is generally not a big barrier for many of our folks, but it needs to be considered. The other important considerations are what I call the more "cognitive accessibility" issues. Substance-abuse providers need to be looking at people's communication capabilities and learning capabilities. They need to know when the individual has a problem understanding or expressing information. They need to know when they are working with somebody who can't read or write. They should be aware of that, actually, for anyone they work with, not just persons with brain injury. It is more and more frequent these days to have homework in treatment, written exercises, writing in journals. . . all kinds of activities that involve both the written and spoken word. You need to know what the person's strengths and weaknesses are in terms of communication channels and then, learning channels, as well. So much treatment these days is done in the group setting. Well, can this person attend well in a group setting? What helps them attend better? If they are disinhibited, how are you going to handle the redirection in the group setting? How do you deal with environmental disruptions? All of those kinds of issues are important. However, in many ways, those with experience in brain injury may take this understanding for granted and fail to communicate the issues to other providers.

MAUREEN:
And how should one handle the issue of impulsivity for a person with substance abuse and brain injury?

DR. CORRIGAN:
I really think you have to roll up your sleeves and be prepared to design a combination of behavioral interventions. You have to have a behavioral interven-

tion as part of the environmental redesign (however much freedom you have for doing that). Sometimes medication is needed. The medication can vary.

dinating what folks are doing. You need somebody in the middle of the treatment assisting the individual in coordinating their services and understanding

they get the stimulus, they do the behavior) is a particularly tough "for instance" in this group.

I really think you have to roll up your sleeves and be prepared to design a combination of behavioral interventions. You have to have a behavioral intervention as part of the environmental redesign...

There is absolutely no set approach right now that I see, in which one appears to work more often than another. It is important in brain injury treatment, in terms of medication, that you have to be willing to try different things and to start low and slow, and then try something else if that is not working.

So, I would say that highly, highly impulsive behavior needs to be managed very comprehensively; it is the only way to deal with it. But there is, I think, a larger point here. For the population of traumatic brain injury, comprehensive management involves a team approach. You cannot have a bunch of different providers all going their own way, coor-

what they are doing. Our TBI network, which is now a 12-year-old program for treating substance abuse after TBI is, at its core, a case management program. And we are able to get involved with folks in a holistic way and stay involved for a while because the behavior change is not going to be overnight. We often say "we are the first ones in and the last ones out" in terms of successful treatment. And the average length of stay is over two years. I think TBI and substance abuse, both of which are associated with the frontal lobes, are in general, problems of inhibition and need comprehensive management. But in particular, that individual who essentially is stimulus bound and impulsive (in other words,

MAUREEN:
There is so much to learn on the topic of substance abuse and brain injury. What suggestions do you have for our readers who have more questions?

DR. CORRIGAN:
I would suggest accessing the website, **www.synapshots.org**, and take it from there. People may think that their only option for help with this problem is from traditional sources, which are not necessarily the best options for everyone. The website provides additional resources and options that are very important to consider since the needs of the folks with brain injury are so specific.