

**TREATING INDIVIDUALS WITH ADDICTIVE DISORDERS: A STRENGTHS-
BASED APPROACH**

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See Don Meichenbaum's recent book: "Treating Individuals With Substance Abuse Disorders: A Strengths-based Workbook for Patients and Clinicians" Routledge Publishers

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THE NATURE OF THE CHALLENGE SUMMARY OF RESEARCH FINDINGS

EPIDEMIOLOGICAL FINDINGS

The lifetime prevalence of drug dependence in the U.S. is 9% in males and 6% in females.

10% of Americans buys and drinks more than half of the alcoholic beverages

The American Psychiatric Association DSM estimates that 5% of the adult population in the U.S. experiences alcohol dependence during any calendar year and 15% of the U.S. population will experience alcohol dependence sometime in their life.

It is estimated that 22 million people ages 12 and older in the U.S. need treatment for illicit drug or alcohol use.

A variety of factors may contribute to the failure of individuals seeking treatment. These include:

- a) denial that substance abuse is a “personal problem” that warrants treatment;
- b) not ready to change;
- c) not have insurance to cover treatment;
- d) concerns that seeking treatment will result in “stigma”, especially in close rural and knit communities (A “Goldfish Effect”);
- e) concerns that seeking treatment will have negative effects on one's job and family;
- f) doubts whether treatment would be helpful;
- g) fear of withdrawal symptoms;
- h) practical barriers like no transportation or child care, not able to get to the clinic due to getting time off from work, no match in service providers to the patient's racial, ethnicity and religious background; no access to internet to do telehealth;
- i) not know where and how to get treatment.

GOOGLE CRAFTS COMMUNITY AND FAMILY REINFROCEMENT TRAINING THERAPY

This is a non-confrontational motivational intervention that encourages individuals to enter treatment.

Alcoholism is associated with more than 100,000 deaths per year in the U.S.

Substance Abuse Disorders (SUDs) cost various government agencies approximately \$470 Billion dollars a year.

Substance abuse has been reported to be the nation's number one health problem.

Individuals with addictive disorders represent a **heterogeneous** population with different etiologies and diverse developmental pathways.

20% of individuals with substance abuse problems abstain on their own without professional treatment.

80% of incidents of family violence are associated with alcohol abuse.

For individuals with co-occurring psychiatric and SUDs, the mental health disorders usually precedes SUDs about 90% of the time with a median onset age of the psychiatric disorder at age 11. The SUDs usually develops 5 to 10 years after the psychiatric disorder (median age 21).

The highest comorbidity of addictive disorders and severe mental illness is among young males, single, less educated and who have a family history of substance abuse.

About one third of persons with mental disorders have experienced a substance abuse disorder during the past 6 months.

Among persons with an alcohol disorder, the odds that they will abuse another substance are 7.1 times greater than those who do not have an alcohol disorder. A person who abuses multiple drugs has a more difficult time stopping drinking and they have a higher risk of relapse after treatment. There is a need to assess for and treat polysubstance use.

EVIDENCE OF COMORBID PSYCHIATRIC AND SUBSTANCE ABUSE DISORDERS (SUDs)

PTSD and SUDs

- PTSD and SUDs are frequent concurrent conditions.
- A majority of patients (80% - 95%) seeking treatment for SUDs report having experienced intense trauma
- Approximately 50% of women and 20% of men in chemical dependency recovery programs report having been victims of childhood sexual abuse. Approximately 60% of women and 80% of men in such treatment programs report being victims of childhood physical abuse and neglect. Childhood sexual abuse doubles the number of alcohol abuse symptoms in adulthood.
- PTSD is three times more common amongst alcohol and drug dependent individuals than it is in the general population. Men with PTSD are five times more likely to have SUDs than men without PTSD.

- Among patients seeking treatment for SUDs, the rate of PTSD ranges from 20% - 35%, with a higher co-occurrence in women (30% - 59%) than in men (11% - 38%). Concurrent PTSD and SUDs is approximately two times more common in women than in men. However, in a community sample, the rate of substance abuse is higher for men than women.
- Research indicates that trauma victims report greater involvement and higher expected future involvement for engaging in substance abuse than do nonvictims. This finding is consistent across different types of violence (e.g., sexual abuse, physical abuse, combat exposure) and in particular, for those who have experienced multiple victimization incidents.
- SUDs patients with PTSD show a more severe substance abuse dependence profile and they tend to use drugs to reduce the impact of negative affect and hyperarousal symptoms (exaggerated startle responses, nightmares).
- Intrusive symptoms at pretreatment are most predictive of relapse.
- People with PTSD and SUDs tend to abuse “hard drugs” (cocaine and opiates), prescription medications, marijuana, as well as alcohol.
- Research indicates different developmental pathways by gender. The primary PTSD groups (where PTSD develops first) are more likely to have experienced childhood sexual assault, whereas the primary substance abuse groups (SUDs first) are more likely to have witnessed a trauma or to have experienced a physical assault. The SUDs first group may have experienced trauma in the context of obtaining and using drugs such as cocaine.
- People with PTSD and SUDs are more likely to have other severe DSM disorders, experience interpersonal medical and legal problems, marital and social conflicts, domestic violence, assault charges, suicide attempts, maltreatment of their children, custody battles, homelessness and HIV risk. They are more likely to be unemployed, financially challenged, socially isolated, devoid of purposeful activities and lack family support.
- There is a need to allow a sufficient wait time (2 weeks to several months) for the patient to be substance free before other psychiatric disorders can be diagnosed.
- Patients with comorbid disorders of PTSD and SUDs have more severe levels of psychopathology, with greater symptomatology for each disorder, more life stressors (e.g., more medical problems, higher unemployment, higher arrest-records); higher health care utilization; less effective coping strategies; and poorer response to treatment than do patients with either PTSD or SUD alone. They are also more likely to experience additional comorbid affective disorders (panic attacks, major depressive disorders), personality disorders, and a record of antisocial and violent behaviors.
- There tends to be a family history of trauma exposure and SUDs.
- Large scale trauma events like natural disasters are associated with increased substance abuse.
- Certain subgroups are especially prone to have high rates of PTSD and SUDs including veterans, the homeless, prisoners, rescue workers, prostitutes and victims of domestic violence.

IMPACT OF ADVERSE CHILDHOOD EXPERIENCES (ACE)

ACE events are common.

Number of categories of ACE Events

ACE Score Prevalence

0	40%
1	25%
2	13%
3	7%
4+	7%

As compared to children with 0 ACE events, consider the following outcomes:

ACE 4+ - - 51% learning and behavioral problems, as compared to 3% for 0 ACE Students

ACE 4+ - - 7X more likely to have sex before age 15

ACE 4+ - - 30x more likely to attempt suicide

ACE 4+ - - 46x more likely to use drugs

ACE 4+ - - 500% increases chance of becoming alcoholic

ACE 6+ - - 4600% increased chance of intravenous drug use

ACE 6+ - - shorter life-span

Some 45 million of these early forms of sexual abuse have been filmed and placed on the Internet. These pictures are preserved digitally and can be recirculated on the Internet. Thus, the fear of further victimization does not end. There are few safeguards, and as a result contribute to ongoing further victimization.

For a discussion of the neurobiological sequelae of trauma (threat-focused) experiences see Meichenbaum's paper on the Melissa Institute Website "**The emerging neurobiology of trauma and resilience: Implications for psychotherapeutic interventions**".

Some of the major findings on the impact of victimization include:

- a. Reduction in the volume and activity of the brain;
- b. Affect HPA (Hypothalamic Pituitary Adrenal Axes) that contributes to hypersensitivity to cortisol and to an increased sympathetic nervous system activity;

- c. Contribute to asynchrony and lateralization differences - - left hemisphere deficits; brain development is derailed;
- d. “Top-down” self-regulatory deficits and increased likelihood of the amygdala “hijacking” frontal lobe executive functions;
- e. Accelerated loss of neurons (premature pruning); Accelerated adolescent development in females - - earlier menarche; Hyperarousal (startle responses, hypervigilance); emotional dysregulation.

McLaughlin, in her Webinar, draws a distinction between children who are experiencing ongoing threat-based uncontrollable and unpredictable violence versus those children who experience some form of deprivation due to a variety of factors. Those children who experience threat-focused experiences evidence:

- a. Fear-based learning and emotional dysregulation/reactivity
- b. Attentional bias toward threat, difficulty distinguishing threat from non-threat stimuli
- c. Hostile attribution bias (“on purpose” attributions)
- d. Compromised Frontal lobe self-regulation functioning due to the impact of Amygdala, Hippocampus, mesolimbic processes.

In contrast, children who experience extreme forms of neglect and deprivation due to an impoverished environment, absence of caretaking as a result of having a clinically depressed mother, inadequate and inconsistent parenting, being raised in a depriving orphanage (Romanian refugee children), evidence a different form of neurological sequelae, than those children who were exposed to some form of ongoing interpersonal violence.

The child’s developing brain “expects” certain inputs from the physical and social environment, and when it is not forthcoming, major neurobiological changes occur. These deprived children evidence:

- a. synaptic pruning of neurons as a result of lack of stimulation (“premature cellular aging”);
- b. cortical thickness;
- c. inadequate development of Prefrontal Cortex (PFC);
- d. accelerated pubertal development;
- e. greater likelihood of developing depression and attachment disorders.

Keep in mind that 90% of brain growth occurs by age 5.

ANXIETY DISORDERS

Alcoholism with comorbid anxiety disorders experience more severe alcohol withdrawal and increased tendency to relapse. Alcohol withdrawal can mimic symptoms of panic and generalized anxiety. Persons with comorbid anxiety and alcoholism often manifest additional comorbid disorders of affective disorders. Comorbidity between alcoholism and social phobia is 20% and untreatable social phobia may interfere with treatment compliance.

EXAMPLES of OTHER FORMS of COMORBID PSYCHIATRIC and SUBSTANCE ABUSE DISORDERS

Severely Mentally Ill Patients

Among schizophrenic some 47% have co-occurring SUDs, which is 4 times more likely than the general population.

Bipolar patients have a 61% co-occurrence of SUDs, which is 5 times more likely than the general population.

90% of both Schizophrenics and Bipolar patients reported at least one traumatic event and 43% met this diagnostic criteria for PTSD. But only 2% had this PTSD diagnosis noted in their medical charts.

MAJOR DEPRESSIVE DISORDERS (MDD) and SUDs

Comorbidity for MDD and SUDs range from 20%-35%. Depression in both before and after alcoholism treatment is associated with poorer treatment outcome. Patients with clinical levels of depression 3 months post treatment is associated with a 5 times risk of relapse.

Situations that involve negative affect are the most common types of situations reported by substance abusers as preceding their lapses to substance abuse.

Treatment procedures that focus on such areas as mood monitoring, activity planning for pleasurable activities, constructive problem-solving thinking, social skills training, modifying lifestyles and managing risk relapse have been found to be most helpful for such comorbid patients.

Alcohol is associated with 25% to 50% of suicides. Between 5% and 27% of all deaths of people who abuse alcohol are caused by suicide, compared to 1% in the general population. One half of all suicides in the U.S. have tested positive for alcohol use and one third have tested positive for opioid use.

The lifetime suicide risk among alcoholics has been estimated to be 60 to 120 times higher than the non-psychiatric population. The risk is particularly increased when heavy drinking is accompanied by comorbid depression, serious medical illness, living alone and interpersonal loss and conflict.

LIFE-SPAN DEVELOPMENTAL PERSPECTIVE

Children with Conduct Disorders have the highest ODDS RATIO (OR) of developing SUDs. (OR=21). Alcoholism is 21 times more likely to occur among individuals with a history of antisocial behavior disorder than without such a developmental disorder. In comparison consider the OR of developmental Bipolar Disorder and SUDs is 5 (the next highest).

Substance abuse increases substantially between ages 11 and 15 years of age.

WHAT IS YOUR ADVERSE CHILDHOOD EXPERIENCES (ACE) SCORE? (See <https://www.cdc.gov/brfss> Behavioral Risk Factor Surveillance System)

- 1. Did you live with anyone who was depressed, mentally ill, or suicidal?*
- 2. Did you live with anyone who was a problem-drinker or alcoholic?*
- 3. Did you live with anyone who used illegal street drugs or who abused prescriptions?*
- 4. Did you live with anyone who served time in prison, jail or other correctional facility?*
- 5. Were your parents separated or divorced?*
- 6. How often did your parents or adults in your home ever slap, hit, kick, punch each other?*
- 7. How often did a parent or adult in your home physically hurt you in any way?*
- 8. How often did a parent or adult in your home ever swear at you, insult you, or put you down?*
- 9. How often did anyone at least 5 years older than you, or an adult, try to make you touch them sexually?*
- 10. How often did anyone at least 5 years older than you, or an adult, force you to have sex?*

What is your ACE score? How have you evidenced resilience, in spite of these adverse events?

GENDER DIFFERENCES and SUBSTANCE ABUSE DISORDERS-SUDs

Females with SUDs differ significantly from their male counterparts in terms of risk factors, developmental history of trauma experiences, the nature of their presenting problems, the pattern of comorbid disorders, motivation for treatment, and reasons for relapse. Over their lifetime women are less likely to seek treatment. Women with SUDs are more likely than men to seek care in non-alcoholic specific settings, especially from mental health service agencies.

Women with SUDs are more likely to present with major depression than their male counterparts. SUDs, mood and anxiety disorders frequently co-occur in women than in men.

Women with comorbid depression and SUDs have a shorter trajectory between years of regular use, problem use and seeking treatment- - a phenomenon called “telescoping”.

Women’s alcohol problems are related to attempts to cope with depression, and related symptoms of PTSD (a “self-medication” model); whereas male drinking is more motivated by peer pressure and by desires to enhance positive moods.

Females are more susceptible than men to the immediate effects of alcohol intoxication and they are more likely to suffer the adverse health consequences of prolonged substance abuse.

The co-occurrence of SUDs and Personality Disorders such as Borderline Personality Disorder is common. Women with such co-occurring disorders have a more severe clinical profile than those with either disorder alone.

There is a high rate of co-occurring SUDs and Eating Disorders (ED) among treatment seeking women. Roughly 50% of individuals with ED are also abusing drugs and/or alcohol which is more than 5X the abuse rates seen in the general population. 30-40% of women with SUD report a history of an ED which has a high rate of suicide. There is a need to explore the interconnectedness or linkage between such comorbid disorders. Does the ED trigger substance abuse? Do they occur concurrently? Do they function in service of each other (e.g., amphetamine abuse in service to ED)?

The rate of SUDs and PTSD in females is 2 to 3X higher than men with SUDs. For women, the most common trauma experience derives from a history of repetitive childhood sexual and/or physical assaults that may be accompanied by multiple accumulative other stressors such as neglect, exposure to domestic violence, and an “invalidating” social environment. For men, PTSD tends to stem from combat or crime trauma.

Women are more likely to have experienced a traumatic stressful event prior to the development of SUDs; whereas for men their trauma experience is more likely to follow the SUDs.

Overall, some 20-65% of individuals in treatment for SUDs report assault histories. Men with PTSD are 5X as likely to have a drug abuse or dependence disorder when compared with men without PTSD. Women with PTSD are 1.4 times as likely to develop SUDs as women without PTSD.

Thus, there is a need to assess for early trauma history, even in those patients who do not evidence PTSD. For example, see the Early Trauma Inventory (Bremner et al., 2000) and Childhood Trauma Questionnaire (Bernstein et al., 2003).

Exposure to traumatic stressors and the accompanying psychological sequelae on the hypothalamic-pituitary-adrenal axis (HPA), which increases cortisol and other stress-related hormones can increase drug cravings. Substance abuse may act as a means of self-medication lessening the effects of hyperarousal and numbing symptoms.

Women who have been traumatized have a more rapid onset of substance abuse than women who have not been traumatized. They also have an increase of PTSD symptoms with initial abstinence and they are more vulnerable to relapse.

A major source of victimization for women is Childhood Sexual Abuse (CSA). In the U.S., CSA is 3 to 5X greater in females, compared to males. CSA in adulthood is associated with depression, eating disorders and SUDs. Clinical studies have found high rates of CSA (20-80%) among women seeking treatment for SUDs. Individuals with CSA are less responsive to treatment and need targeted treatment for CSA.

There is a high rate of revictimization among individuals with CSA histories, including intimate partner violence, stranger rape, and physical assaults in adulthood. Helping such patients protect themselves against future trauma is a critical feature of treatment.

The results of the National Comorbidity study found that approximately 80% of women with PTSD have at least one other psychiatric diagnosis, and some had two or more additional diagnoses.

Individuals with comorbid SUDs and PTSD typically have a more severe clinical profile than those with only one disorder. They tend to abuse more severe substances (e.g. cocaine), have high rates of psychiatric comorbidity including depression, and have poorer treatment outcomes. A series of additional problems are often common, including problems related to interpersonal deficits, physical health issues, difficulties coping with parental responsibilities, homelessness, HIV/sexually-transmitted infections, risk behaviors, suicidality, and intimate partner violence.

GENDER-SPECIFIC TREATMENTS

Greenfield and Pirard (2009) summarize the beneficial features of gender-specific treatment for women with comorbid psychiatric and substance abuse disorders. They include:

- (1) the women's positive engagement and responsiveness to individual psychotherapy and to women's focused supportive groups;
- (2) the absence of sexual harassment and intimidation that may occur in mixed-gender programs;
- (3) the mixed-gender treatment programs were judged as not being as conducive to open consideration of women's needs and issues and experiences such as victimization (rapes, childhood sexual abuse), child care, financial concerns, relationship issues, women's societal roles and interpersonal violence. Women are more likely to have partners who use drugs or alcohol and they have fewer friends than their male

counterparts. There is a need to address repairing relationship with children and family members.

Gender-specific treatment for women may be organized as either female-only programs or female-only interventions within mixed gender programs. Women with comorbid disorders, especially if the women are pregnant have specific needs such as prenatal and post partum considerations, as well as baby services, client advocacy issues, financial issues assistance with housing, and the like. The treatment program may also include peer support groups, on-site 12-step meetings, social outings and specialized counselling for such issues as eating disorders, risk of revictimization (Safety First issues), and specialized referral services. Treatment-programs should consider policies and services allowing children to accompany their mothers to treatment.

Motivational Interventions procedures can be tailored in gender-specific ways as in the case of substance abusing pregnant mothers.

In spite of these potential advantages, Greenfield and Pirard (2009, p. 295) conclude:

“Based on the available literature, the effort of gender-sensitive programs and services for women in treatment outcomes remains unclear.”

While the research yields mixed results (Ashley et al., 2003), recent clinical trials of Women’s Recovery Groups (WRG) by Greenfield and her colleagues (2007) have yielded encouraging beneficial results of gender-specific interventions.

Finally, the research on matching the gender of the psychotherapist and the patient have reported mixed results, as well.

See SAMHSA REPORT “After incarceration: A guide to help women re-enter the community”. Publication Number PEP-20-05-01-001.

TREATMENT EFFECTIVENESS STUDIES

There are substantial differences among therapists in achieving patient treatment outcomes. It matters not only what treatment is being offered but who offers it.

Less than 10% of individuals with Substance Abuse Disorders (SUDs) seek professional help. 90% of individuals who have suffered a negative consequence from alcohol abuse do not seek treatment. It is only after they have experienced multiple negative consequences that they seek help.

The majority of those who receive professional help do not complete treatment.

Many of those who complete treatment do not fare well, with more than 50% remaining problematic or use drugs within 6 months.

Relapse rates across chemical addictions (heroin, cocaine, nicotine, alcohol) and across various treatment models are **fairly uniform** and **discouraging –around 75%**. The likelihood of life-long abstinence is low. Among alcoholics who have been treated

- 1/2 will be abstinent at 3 months
- 1/3 will be abstinent at 6 months
- 1/8 will be abstinent at 12 months
- 1/10 will be abstinent at 18 months

Approximately 90% of treated alcoholics will have at least one drink within 3 months of abstinence treatment. 45%-50% will return to pre-treatment drinking levels within a year.

Overall, about 20% to 30% of alcoholics evidence long-term success as a result of treatment. Among people who do not maintain perfect abstinence as a result of treatment, drinking is reduced by as much as 87%. The majority of patients do recover after three years of seeking treatment.

70% of those who relapse will do so during the first 3 months after discharge. Nearly all who relapse do so before 6 months expires. The first 90 days post treatment is the most vulnerable period for relapse across various substances of abuse (heroin, smoking, alcohol).

An emergent view of SUDs is that it should be considered a “chronic disorder” that requires a “Recovery-oriented System of Care”. There is a shift from acute intervention models to models of sustained recovery support. (See www.glatc.org and <http://www.dnhas.state.ct.us/recovery.html> and <http://www.Paths-brecovery.org> and <http://www.facesandvoicesofrecovery.org> and <http://www.bhrm.org/bhrmpsummary.pdf>).

Major reviews by Berglund et al. (2003) and by Imel et al. (2000) of a wide variety of psychologically-based interventions (e.g., 12 Step Facilitation, Alcoholic Anonymous, Motivational Enhancement Therapy, Cognitive behavior self-control training, Relapse prevention training, Aversion Therapy and Psychodynamic Therapy) were found to be equivalent, ***“There was no difference in outcome obtained among competing treatment approaches”*** (Mee-Lee et al., 2010, p. 399).

An intensive inpatient treatment program is no more effective than less intensive treatment in outpatient settings.

Studies that have compared differing lengths of treatment for alcohol use have not found differential positive effects for longer lengths of treatment. Increasing the length and intensity of treatment may be more important in treating patients with more severe dependence and co-occurring psychiatric problems.

Low intensity interventions that focus on assessment, feedback and recommendation to reduce heavy drinking can be effective.

Cognitive behavioral treatment (CBT) has been found to be more effective as one component of intensive treatment programs than as stand alone interventions. Cognitive behavior therapy places

primary focus on how substance abuse impacts a variety of areas related functionally to usage and relapse prevention processes (Use wrap around services where indicated).

Meta-analytical studies of other skills-oriented treatment programs indicate positive results for a variety of interventions including Community Reinforcement Treatment Approach; Behavioral Social Skills Training; Motivational Enhancement Therapy; Brief Motivational Interventions; Behavioral Monitor Therapy and Behavioral Self-control Training.

What does not work include Educational Films and Lectures; Confrontational Interventions; General Alcoholism Counselling; Insight Based Psychotherapy.

There is also evidence supporting the use of severe pharmacological therapies including Disulfiram (Antabuse), Naltrexone (ReVia) and Acamprosate (Campral).

Treatment of additional presenting problems leads to more positive treatment outcomes than attention to the substance abuse disorder alone.

Over 50% of those who enter treatment will drop out within the first month. Those who drop out of treatment have worse outcomes. For example, only 54% of subjects completed treatment in PROJECT MATCH and only 27% completed treatment in another major community study conducted by Morgenstern et al. (2001).

Among those seeking help and who drop out of treatment, some 20% will abstain without professional help and an additional 20% will moderate their drinking.

Mandated treatment, or those patients who are perceived as merely “putting in their time”, benefit from treatment just as much as those who voluntarily seek treatment. There are few treatment outcome differences between individuals who were or were not mandated into treatment with regard to program compliance and treatment outcomes, regardless of gender or ethnicity.

Self-help Therapy such as AA has been found to be more effective and less expensive than traditional therapy led by professionals.

Individuals who have the poorest social support network, namely, significant others who support drinking, had the best outcome in AA. Social support by AA members, as opposed to non-AA members, had the greatest impact.

Twelve step facilitation procedures are needed to address the high dropout rate.

EXAMPLES OF INTEGRATIVE TREATMENT PROGRAMS

Treatment strategies may be conducted in a Sequential, Parallel or in an Integrated approach. Integrated treatments emphasize the links between trauma exposure and addictions. A prominent example of such an Integrative treatment approach has been offered by Marsha Linehan in the form of Dialectical Behavior Therapy. Dialectical Behavior Therapy outlines a treatment hierarchy that addresses the patient's:

- 1) life-threatening behaviors;
- 2) treatment-interfering behaviors (A Barriers analysis);
- 3) quality-of-life interfering behaviors (multiple complex problems).

The DBT treatment combines individual, group skills training, telephone coaching and therapist consultation teams. The skills training focuses on mindfulness, distress tolerance, emotional regulation, urge surfing, relapse prevention and interpersonal effectiveness. This is combined with an Active Outreach component. There is encouraging data for the relative efficacy of the DBT treatment approach with comorbid Personality Disorder (PD) and substance abuse (SUDs) patients.

Other integrative treatment approaches that have been used with comorbid patients include:

Addiction and Trauma Recovery Integrated Model (ATRIUM)	Miller and Guidry, 2001
Concurrent Treatment of PTSD and Cocaine Dependency (CTPSD)	Brady et al, 2001
Substance Dependency-PTSD Therapy (SDTP)	Triffleman et al., 1999
Seeking Safety (SS)	Najavits, 2002, 2003, 2006
TRANSEND	Donovan et al., 2001
Trauma Recovery and Empowerment (TREM)	Fallot & Harris, 2002
Dual-Focused Schema Therapy (DFST)	Ball, 1998; Ball et al., 2005
Trauma-focused, patient-centered,	Ford et al., (2009)
Emotional self-regulation: Trauma-Adaptive Recovery Education and Therapy (TARGET)	
Skills Training in Affective and Interpersonal Regulation with	Cloitre et al., 2009

Motified Prolonged Exposure
STAIR-MPE

Cognitive Behavior Therapy
(CBT)

Beck et al., 1999; Coffee et al., 2003; Conrad & Stewart, 2005; Hepner et al., 2007; Marlatt & Witkiewitz, 2005; Mueses et al., 2003; Otto et al., 2005; Reilly & Shopshire, 2002; Riggs & Foa, 2003; Ruzek et al., 1998

The patient's rating of the therapeutic relationship is a significant predictor of participation, and drinking behavior both during treatment and at follow-up.

An effective Therapeutic Alliance (TA) contains the following essential ingredients:

- a) shared treatment goals between the patient and the therapist
- b) consensus on the means, methods or tasks of treatment ("pathways thinking")
- c) a positive emotional bond between the patient and the therapist
- d) an alignment between the patients' frame of reference or theory of their presenting conditions and their behavior change and the theory underlying the treatment intervention program.

TREATMENT IMPLICATIONS of RESEARCH FINDINGS

According to the Institute of Medicine, there is a lag of 17 years between the publication of health care research results and the impact in the delivery of the treatment.

Consideration of Research Findings in Terms of

Assessment Issues

Therapeutic Issues

Therapeutic Alliance and Engagement Procedures

Treatment Features

Staff Training

I. ASSESSMENT ISSUES

1. Assessment should be comprehensive, ongoing and provide clients with feedback. Assessment and treatment are highly interconnected and include outcome-driven data that can be regularly given to both patients and therapists in order to flexibly alter the treatment program.
2. Assessment and Treatment should include the patient's:
 - a) Polysubstance abuse and their functional impact. Use a multi-gating assessment approach.
 - b) Comorbidity- (Leave ample time-2 weeks to several months after abstinence period).
 - c) Life-span development of substance abuse and psychiatric disorders
 - d) History of victimization and trauma exposure.
 - e) Social network, including family history and social supports for abstinence.
 - f) Risk assessment toward self and others.
3. Assessment should include the measurement of the client's strengths, signs of resilience, not only of the individual, but also family and cultural group ("survival skills").
4. Assessment should include Adherence History and potential Barriers (Individual, Social and Organizational) encountered and those likely to occur in the future.

5. Assessment should include the patient's theory of his/her distress (presenting problems) and theory of behavior change and potential alignment with the treatment philosophy.
6. Assessment information should be incorporated into a Case Conceptualization Model (CCM) that informs treatment decision-making and where feedback is given to the patient.
7. Assessment should include both treatment outcome and follow up measurement and process measures (patient engagement and patient satisfaction measures).
8. Assessment should include staff behaviors such as degree of cultural sensitivity/competence; ability to develop and maintain therapeutic alliance; use of spirituality-based interventions and the degree of Vicarious Traumatization and Burnout.
9. Assessment of the Treatment milieu (ala R. Moos type measures)

II. THERAPEUTIC ALLIANCE and ENGAGEMENT STRATEGIES

10. Focus on Therapeutic Alliance (TA) factors from the outset and monitor TA, and work on TA impasse/strains/ruptures. The use of Treatment Informed Feedback (FIT) using session-by-session patient feedback is a critical feature of effective treatment outcome. The quality of the therapeutic alliance in individual therapy and the level of group cohesion in group treatment are predictors of treatment outcomes.
11. Use Motivational Interviewing and Related Procedures to nurture Active Client treatment participation.
12. Measure TA on a regular basis, including group cohesion and related measures.
13. Conduct Adherence History and anticipate future possible adherence issues (Barrier-based interventions).
14. Foster collaboration and nurture hope (Use collaborative goal-setting, Time lines, coping efforts, psychoeducation and "Clock" metaphor). Reframe symptoms as coping effects - - "stuckness" issue.
15. Ensure that the patient perceives therapeutic benefits early on in treatment (e.g., reduction in symptom distress).

III TREATMENT FEATURES

16. Individualize the treatment program and provide integrated treatment that is gender and culturally-sensitive.
17. Use ancillary and adjunctive services to treat other life problems (homelessness, legal problems, health problems) and focus on the maintenance of treatment effects.
18. Implement generalization guidelines. Do not "Train and hope" for transfer.

19. Training should focus on intra- and interpersonal skills (emotion regulation, distress tolerance, risk-reduction behaviors, problem-solving) and interpersonal skills (communication, and assertiveness skills) and well-being training. Build on strengths such as spirituality.

20. When training coping skills build in generalization guidelines. Do not just “train and hope” for transfer and maintenance of treatment effects

21. Focus on relapse prevention from the outset and on ways to maintain sobriety that go beyond abstinence (Balanced life-style).

22. Provide Trauma-focused interventions.

23. Involve significant others in training programs.

24. Nurture and reinforce “change talk”.

25. Have an active aftercare system that builds on the long-term patient’s Recovery Plan. Build in ways to monitor progress and outcome.

IV. STAFF TRAINING

26. Ensure that the entire staff have a common language system and share a common treatment philosophy.

27. Ensure that the staff communicates regularly about specific cases.

28. Ensure that the staff receive ongoing supervision and professional feedback and training.

29. Systematically assess the needs, perceptions and well-being of staff in terms of vicarious traumatization (VT), burnout and perceived benefits of their job.

30. Consider ways to employ individual, collegial and organizational interventions to improve staff well-being.

31. Monitor staff turnover and include “Exit” interviews for those leaving.

32. Provide “perks” and incentives for professional development.

A CONSTRUCTIVE NARRATIVE PERSPECTIVE (CNP) OF ADDICTIVE BEHAVIOR: AN “ADDICTIVE MINDSET”

The role of storytelling: “As the adage states “Substance abuse is 10% using and 90% thinking.”

The following description provides examples of how individuals who have addictive disorders engage in self-justifying sustaining self-talk and self-generating rationalizations to convince themselves to continuing using substances. These thinking and emotional processes can be summarized using the Acronym DEFENCE. (Note that in the U.S. the word DEFENSE is spelled with an S. However, in England the word DEFENCE is spelled with a C. For purposes of my description I adopted the British spelling).

DEFENCE

D Denial processes

E Entitlement thoughts

F Fatalistic thoughts

E Evaluative thoughts about others and about oneself

N Needs-based thinking processes

C Illusions of Control

E Expectations of self-satisfying, stimulating experiences

1. First, substance abusing individuals may evidence some form of denial or reframe that they have addictive behavior problems: “I don’t think I have a problem. You are overreacting.”

“I don’t think I have to change.”

“Drinking (substance abuse) is a problem for some people, but not for me.”

“I am not an addict, I am only a social drinker.”

“I could use and no one would ever know.”

“No one in my family was diagnosed as an alcoholic.”

2. **Entitlement** thoughts which constitute permission-giving beliefs that they deserve and are entitled (“Earned the right to use”), and moreover, that they have no other options available for obtaining self-deserved pleasures:

“I deserve x.”

“I cannot be happy without x.”

“I have quit everything else.”

“Getting high is the only thing I look forward to.”

“I am my own boss and I don’t like people telling me how to live.”

“It is the only way to be accepted.”

3. **Fatalistic** thinking reflects individuals deep-seated feelings of helplessness, powerlessness and uselessness that sustain addictive behaviors:

“I am helpless.”

“I feel trapped. This is my only escape.”

“I am powerless.”

“I lack willpower.”

“I am at the mercy of my urges.”

“I have hit bottom. What is the use of stopping? I will start again.”

“Once an alcoholic, always an alcoholic.”

“I am useless.”

“I am a complete mess.”

“Stopping won’t do any good anyway.”

“I am stuck in my life. I can never get out of my drug habit.”

“I hate myself.”

4. **Evaluative** thoughts about others and about oneself which reflect negative views about their relationships with significant others in their lives resulting from feeling marginalized, unsupported and vengeful. Feelings of being rejected, unappreciated and lonely can trigger addictive behaviors.

“Drinking is my way of getting back at them.”

“No one really cares if I use or not.”

“No one understands me. No one can help me anyway.”

“You can’t trust people. In order to be safe, I have to use.”

“No one thinks I am worth saving and I agree.”

“I am a burden on others and they would be better off without me around.”

“I am too tired to continue living.”

5. **Need-based** self-statements and beliefs that reflect a tyranny of “shoulds”, “needs”, “musts” and “cant’s”. Self-talk that begins with “I need, must, should X”, drives the urge to use substances.

“I need x in order to unwind, avoid withdrawal symptoms, forget, survive.”

“I need x in order to (get some benefits) such as be creative, attractive, sociable and sexy.”

“I must use to have a good life.”

“I can’t survive without x.”

“Without x, I can’t handle, control, tolerate, cope.”

“Life is unbearable, I have to escape for a while.”

“I need to use x in order to avoid the pain of withdrawal symptoms.”

6. **Illusions** of control are held at some level that they can exert control and handle substance abuse behaviors.

“I can test myself.”

“I am different from others who use.”

“I know how to handle my use.”

“I am more in control of myself, when I use.”

“I can hold my liquor better than others.”

7. **Expectations** of self-satisfying and stimulating experiences as a result of using substances. Such thoughts highlight the expected and perceived physiological, psychological and social benefits of using, especially with others who are also using substances.

“It just feels so good. I love the buzz and the high.”

“I need a pick-me-up.”

“When I use I feel alive.”

“My body needs this to survive.”

“If I don’t use drugs, I will lose my friends”

“When I use, I have more friends and better sex.”

“When I use with others, I can find customers to sell to.”

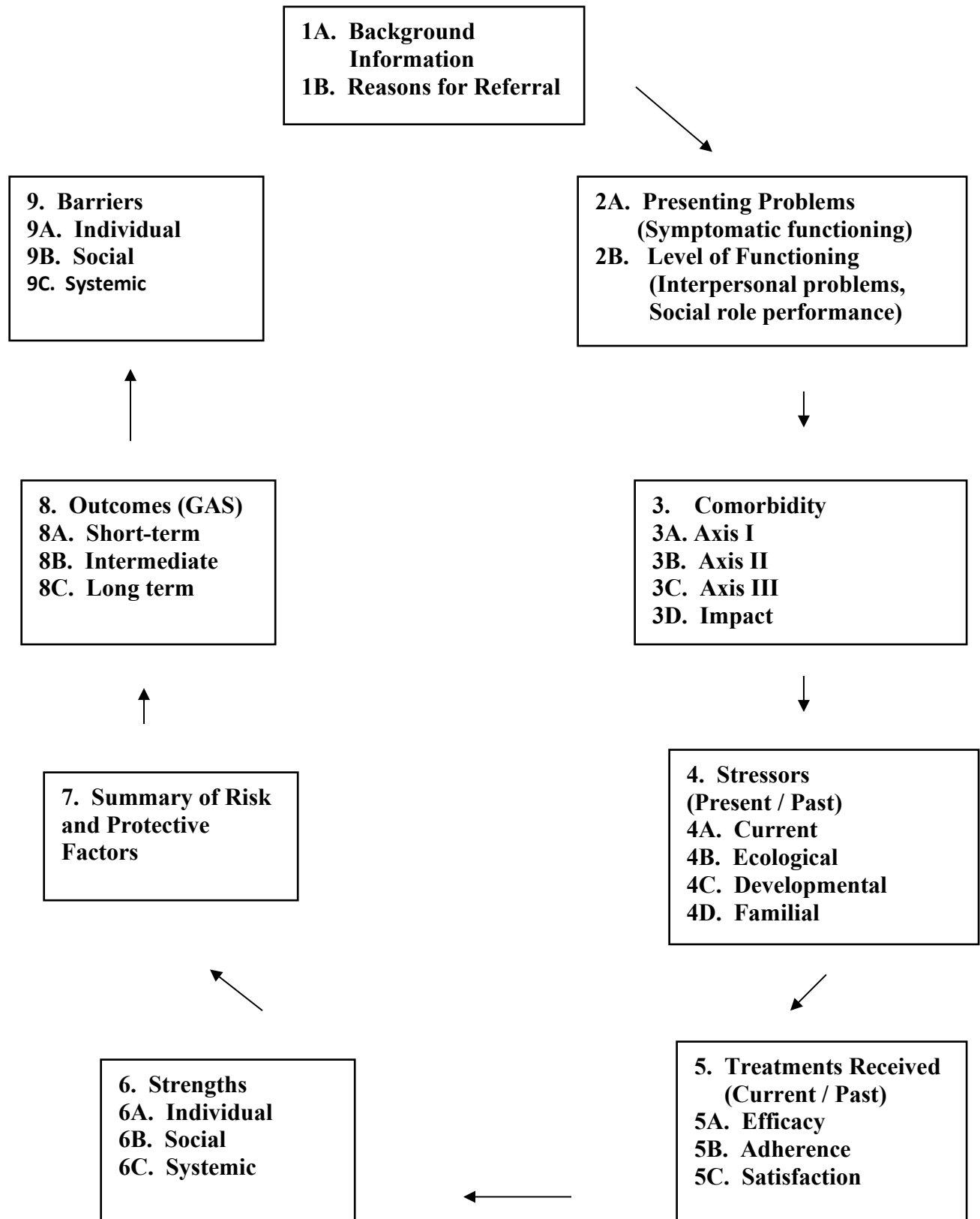
Are there any other examples you can offer of how you convince yourself to continue using? What advice would you have as to how to change these thought patterns and the accompanying addictive behaviors?

A CASE CONCEPTUALIZATION MODEL (CCM)

A well-formulated CCM should:

1. identify developmental, precipitating and maintaining factors that contribute to maladaptive, mental health and substance-abusing behaviors and adjustment difficulties and that reduce the quality of life;
2. provide direction to both assessment and treatment decision-making;
3. provide information about developmental, familial, contextual risk and protective factors;
- 4 highlight cultural, racial, religious and gender-specific risk and protective factors;
5. identify individual, social and cultural strengths that can be incorporated into treatment decision-making;
6. provide a means to collaboratively establish the short-term, intermediate and long-term goals and the means by which to achieve them;
7. identify, anticipate and address potential individual, social and systemic barriers that may interfere with and undermine treatment long-term effectiveness;
8. provide a means to assess on a session-by-session basis the patient's progress and the quality of the therapeutic alliance on a regular basis;
9. consider how each of these treatment objectives need to be altered in a culturally, racially and gender sensitive fashion;
10. engender and bolster a high empathy therapeutic alliance, and one that nurtures hope in both the patient and the treatment team.

GENERIC CASE CONCEPTUALIZATION MODEL



FEEDBACK SHEET ON CASE CONCEPTUALIZATION

Let me see **if I understand:**

BOXES 1& 2: REFERRAL SOURCES AND PRESENTING PROBLEMS

“What brings you here...? (distress, symptoms, present and in the past)
 “And is it particularly bad when...” “But it tends to improve when you...”
 “And how is it affecting you (in terms of relationship, work, etc)”

BOX 3: COMORBIDITY

“**In addition**, you are also experiencing (struggling with)...”
 “And the impact of this in terms of your day-to-day experience is...”

BOX 4: STRESSORS

“Some of the factors (stresses) that you are currently experiencing that seem to **maintain** your problems are...or that seem to **exacerbate** (make worse) are... (**Current/ecological stressors**)
 “And it's not only now, but this has been going on for some time, as evident by...” (**Developmental stressors**)
 “And it's not only something you have experienced, but your family members have also been experiencing (struggling with)...” “And the impact on you has been...” (**Familial stressors and familial psychopathology**)

BOX 5: TREATMENT RECEIVED

“For these problems the treatments that you have received were-note type, time, by whom”
 “And what was **most effective** (worked best) was... as evident by...
 “But you had **difficulty following** through with the treatment as evident by...” (Obtain an adherence history)
 “And some of the difficulties (barriers) in following the treatment were...”
 “But you were specifically **satisfied** with...and would recommend or consider...”

BOX 6: STRENGTHS

“But **in spite of**...you have been able to...”
 “Some of the strengths (signs of resilience) that you have evidenced or that you bring to the present situation are...”
 “Moreover, some of the people (resources) you can call upon (access)are...” “And they can be helpful by doing...” (**Social supports**)
 “And some of the services you can access are...” (**Systemic resources**)

BOX 7: SUMMARY OF RISK AND PROTECTIVE FACTORS

“Have I captured what you were saying?”
 (Summarize risk and protective factors)
 “Of these different areas, where do you think **we** should begin?” (Collaborate and negotiate with the patient a treatment plan. Do **not** become a “surrogate frontal lobe” for the patient)

BOX 8: OUTCOMES (GOAL ATTAINMENT SCALING PROCEDURES)

“Let's consider what are your expectations about the treatment. As a result of our working together, what would you like to see change (in the short-term)?
 “How are things now in your life? How would you like them to be? How can **we** work together to help you achieve these short-term, intermediate and long-term goals?”
 “What has worked for you in the past?”
 “How can our current efforts be informed by your past experience?”
 “Moreover, if you achieve **your** goals, what would you see changed?”
 “Who else would notice these changes?”

BOX 9: POSSIBLE BARRIERS

“Let me raise one last question, if I may. Can you envision, can you foresee, anything that **might get in the way**- any possible obstacles or barriers to your achieving your treatment goals?”
 (Consider with the patient possible individual, social and systemic barriers Do not address the potential barriers until some hope and resources have been addressed and documented.)
 “Let's consider how we can anticipate, plan for, and address these potential barriers.”
 “Let us review once again...” (Go back over the Case Conceptualization and have the patient put the treatment plan in his/her own words. Involve significant others in the Case Conceptualization Model and treatment plan. Solicit their input and feedback. Reassess with the patient the treatment plan throughout treatment. Keep track of your treatment interventions using the coded activities (2A, 3B, 5B, 4C, 6B, etc) Maintain progress notes and share these with the patient and with other members of the treatment team.

CASE CONCEPTUALIZATION MODEL APPLIED TO SUBSTANCE ABUSE DISORDERS

1A. Background Information - gender, marital status, sexual orientation, ethnicity, social and religious background, migration, highest level of education, current and past employment history, current source of income, current and family constellations, current living arrangements, life-style, criminal history and cohabitating with substance abusing partner./ social activities, current Activities Daily Living (ADL's), Medical history and current medical condition, including pregnancy. USE CHECKLIST ADMISSION FORM.

1B. Reason for Referral - self-referred "sees a problem"; referred by family member; mandated treatment. How did the patient arrive at the treatment center.

Record the level of insight, judgement, ability and willingness to engage treatment staff.

USE MOTIVATIONAL INTERVIEWING PROCEDURES AND VARIOUS PATIENT WORKSHEETS

2A. Current and Past Chief Complaints and Symptoms

1. Conduct both situational and functional analysis of substance abuse and related problems.
2. Conduct a time-line of sequence of disorders.
3. Obtain a substance use history (Onset, polysubstance use, involvement peer group and family, heavy and binge drinking, means of obtaining money to support drug habits abstinent days). Information on alcohol-related screening tests can be found at www.SAMHSA.gov.
4. Assess current and past use - frequency, severity, abstinent days, incapacity (for example, perceived need to cut down on use; being annoyed by others for criticizing substance first thing in morning; and perceived risk associated with illicit drug use). Also assess for alcohol-related problems and lifestyle associated with substance use. (*Use the CAGE, MAST, AUDIT, Addiction Severity Index, Drinkers' Profile assessment tools*).
5. Obtain trauma history. Note nature, duration, frequency, intensity, presence of psychological trauma, perceived threats, relationship to perpetrator(s). Assess social supports and treatments provided before and after trauma. Assess for current PTSD risk of revictimization-risk-taking behaviors and safety issues.
6. Consider the functional role of substance abuse. Is substance abuse related to social, self-enhancement and/or coping motives. Was substance use a form of "self-medication", to reduce inhibitions, join social groups, drinking to get drunk ("See if I can hold it better than others"), as an exchange for sex, as a means to lose weight? The total number of reasons has been found to be associated with higher levels of alcohol use.

7. Assess for personality correlates. See Conrad & Stewart (2005) for a discussion of personality-matched dual-focused interventions based on the patient's Sensation Seeking (SS), Anxiety Sensitivity (AS), Hopelessness (H) and Impulsivity (I). Some suggestion that female SUD patients with different personality styles have specific drug preferences: SS = alcohol dependence; AS = anxiolytic substances; H = opioids; I = cocaine (Conrad et al., 2000). Also, assess for impulsive and reckless (high-risk) behaviors (unprotected sex, speeding, self-injurious behaviors).
8. Be sure to assess for "strengths". (Box 6)

Note that specific substance abuse may correspond to a specific trauma-related symptom profile. Alcohol-dependent individuals tend to report more trauma-related arousal symptoms than do cocaine dependent individuals, raising the possibility of a connection between the type of substance and the symptom profile.

2B. Functional Impact – Quality of life indicators

Can use a variety of PTSD and SUDS assessment tools (see Meichenbaum's Clinical Handbook for Treating Adults with PTSD for a list) to understand how substance abuse and trauma contributed to each other and to current level of functioning. Also see SAMHSA 2005, TIP 42). The therapist can ask the client:

**On a 10 point scale, where 1 is the worst problem ever and 10 is no problem at all indicate:
where were you a year ago...where are you now...and where do you expect to be in 6 months from now?
How do you see yourself accomplishing these changes?**

3. Comorbidity

3A. Evidence of Comorbidity – Obtain **Timeline** of birth to present time of stressor, comorbid disorders and treatments. In addition to PTSD and SUDS consider Axis I, II, III disorders (Victims of trauma often report numerous physical health problems (**3B and 3C**). Comment on the impact

Access for physical complaints, especially pain symptoms and the use of opioids and other pain medication and other forms of treatment. Assess for other major emotional issues such as Prolong and complicated grief and Traumatic bereavement, guilt, shame, anger, PTSD and moral injuries.

4. Stressors

4A. Current - financial, legal, medical, familial, relationship distress, domestic violence, "daily hassles", job-related.

4B. Ecological - environmental stressors; (culture-at-large has a blaming victim attitude, acculturative stressors, "secondary victimization" experiences in terms of medical and legal systems; living in poverty; experience discrimination).

4C. Developmental - history of substance abuse and history of victimization, history of psychopathology, history of aggressive and violent behavior. Adolescents who start drinking before age 15 are five times more likely to report alcohol dependence or abuse alcohol in adulthood than individuals who first used alcohol at age 21 or older. 16% of those who began using alcohol before age 14 are classified with alcohol abuse and dependence. The rate is 4% for those who began drinking alcohol between ages 18 and 20. (*See www.oas.samhsa.gov*)

4D. Familial – history of familial psychopathology, familial history of substance abuse, intergenerational victimization. Children of addicted parents are 4 times more likely to be sexually abused and are at higher risk for foster care, depression, anxiety, somatic ailments, academic difficulties and psychiatric hospitalization. Biological studies indicate that children of alcoholics respond differently to alcohol ingestion than children of nonalcoholics (e.g., have increased feelings of pleasure, elation and relaxation, and decreased feelings of intoxication, and experience exaggerated levels of serotonin when ingesting alcohol- SAMHSA, 2005). Children of alcoholics have more psychosocial problems than do children of non-substance dependent parents. (e.g., increased somatic complaints, anxiety, depression, conduct disorder, alcoholic, lower academic achievement and lower verbal ability). Moreover, the parents of these children are reluctant to allow them to engage in any type of mental health treatment. Interventions with parents of alcoholic children have found more favourable impact on preadolescent children (ages 6-12 years) than adolescent children (ages 13-16).

ADMINISTER ACE QUESTIONNAIRE (ADVERSE CHILDHOOD EXPERIENCES QUESTIONNAIRE). It is the cumulative number of developmental stressors that is most impactful.

5. Treatments (Current and Past)

5A. All Forms of Treatments Received and Evidence of Efficacy: Include traditional healing practices and interventions for family members.

5B. Treatment Non-adherence

5C. Treatment Satisfaction

6. “Strengths” – Signs of Resilience (Obtain Timeline 2 of “in spite of” experiences)

6A. Individual – Personal strengths and abilities, beliefs, ethnic and cultural pride, spirituality, optimism, desire to change.

6B. Social – Presence of social supports and network, sense of prosocial community. Intergenerational transmission of resilience-engendering beliefs and behaviors.

6C. Systemic – Culturally-sensitive services available, continuity of care, case management and follow through services.

8. Collaborative Goal-setting (Use Goal – Attainment Scaling Procedures). (Obtain Timeline 3 beginning Now and extending into future).

8A. Short-term goals

8B. Intermediate goals

8C. Long-term goals

USE GOAL-ATTAINMENT SCALING (GAS) PROCEDURES

Collaborative goal-setting is used to determine how the patient, significant others and the treatment team can identify specific behaviorally proscriptive short-term, intermediate and long-term treatment goals. What are the specific agreed-upon signs of improvement that can be worked on and expected? For each target behavior, help the patient describe what specific changes would look like? If the patient was very successful as a result of treatment, what would change in that target behavior look like? If he/she was only moderately successful what would that look like? If little or no change occurred what would that look like? These behaviorally specific goals should be stated in POSITIVE terms, as behaviors designed to increase, NOT stated in NEGATIVE terms designed to be reduced or stopped.

GOAL ATTAINMENT SCALING (GAS) asks the patient to identify Three Target behaviors, each developed collaboratively with the patient in specifying what Minimal, Moderate and Significant Improvement would look like and how progress is to be evaluated. The therapist should work with the patient to indicate exactly what each level of behavioral improvement would look like.

SPECIFIC WAYS MY BEHAVIOR SHOULD CHANGE

MINIMAL IMPROVEMENT		MODERATE IMPROVEMENT		SIGNIFICANT IMPROVEMENT
0% change	25% change	50% change	75% change	100% change

TARGET
BEHAVIOR 1

TARGET
BEHAVIOR 2

TARGET
BEHAVIOR 3

9. Potential Barriers

9A. Individual – belief systems such as a fatalistic worldview, mismatch between the patient's and the theoretical orientation of the treatment approach; neuropsychological impairment, level of psychopathology, reluctance to participate in treatment, nonadherence history, relapse history, avoidance behaviors.

9B. Social – exposed to high risk environment. Significant others undermine and may sabotage treatment program, exposure to peer pressure and familial influences (codependent partners)

9C. Systemic – Barriers to access to treatment services (transportation, child care, waiting list, lack of insurance, geographic isolation). Ethnic mismatch between the patient and the therapist results in higher dropout rates.

ASSESSMENT QUESTIONS “THE ART OF QUESTIONING”

The following illustrative list of questions are designed to help determine the patient’s reasons for seeking treatment, areas of concern that the patient and significant others have about the patient and the role that substance abuse plays. (Can use substance abuse or drug use for the word drinking in these questions).

Help Recognize the Problems

*What difficulties have you had regarding drinking?
How has drinking stopped you from doing what you want?
In what ways have other people been harmed by your drinking?*

Help Acknowledge Concern

*What worries you about your drinking?
What do you think could happen to you?
In what ways does this concern you? Your family?*

Help Generate Intention To Change

*What reasons do you see for making a change?
If you succeed and it all works out, what will be different?
What things make you think you should keep on drinking?*

Help Develop Optimism

*What encourages you to think you can change?
What do you think will work for you, if you decide to change?
What is a positive example from your past of when you decided to do something differently?
How did you accomplish this goal?*

This question can help bolster hope, the clinician can also use the **MIRACLE QUESTION** derived from Solution-focused therapy. In order to help the patient imagine what life would be like if his or her problems were solved, to nurture hope of change and to highlight the potential benefits of working for change.

“Suppose that while you are sleeping tonight and the entire house is quiet, a miracle happens. The problems that brought you here are solved. Because you are sleeping, however, you didn’t know that the miracle has happened. When you wake up tomorrow morning, what will be different that will tell you a miracle has happened, and that the problems that brought you here have been solved?”

Help Reinforce Commitment To Change

Since no one can decide for you and you are in a position to choose, let me ask:

“What do you think has to change?”

“What are you going to do?”

“How are you going to do it?”

What are some benefits of making such changes?”

“How would you like things to turn out, ideally?”

“How can I help you bring about such change?”

The clinician can then add:

“Let me explain to you what I do for a living. I work with folks like yourself and I try to find out:

How things are in your life right now and how you would like them to be?

What have you tried in the past to bring about such change?

What has worked and what has not worked, so we can both be better informed?

Worked, as evident by? What were you most satisfied with that you could try again?

If we work together on your areas of concern, and I hope we can, how would we know if you were making progress? What would other folks in your life notice?

How would that make you feel? What conclusions or lessons would you draw as a result of such changes?

Permit me to ask, one last question. Can you foresee, envision what might get in the way of your bringing about such change?

Is there some way that you can learn to anticipate and plan for such possible barriers or potential obstacles?

SEE PATIENT WORKSHEETS BELOW IN APPENDIX A (PAGE 56)

STUDIES of PREDICTORS and MECHANISMS of BEHAVIOR CHANGE

Research findings have indicated that a variety of process variables are most predictive of treatment outcome. These variables include:

- 1) The quality of the therapeutic relationship;
- 2) The degree of client engagement and active participation in the therapy process;
- 3) The clients subjective experience of improvement early in treatment, especially tied to outcome-driven timely feedback;
- 4) The length of treatment and aftercare attendance;
- 5) The presence of social supports for abstinence and their involvement during the treatment program;
- 6) The use of Motivational Intervention procedures that evoke Change Talk.
- 7) The patients' "faith" (belief) in the program and his/her perception that the staff care about their progress and treatment outcome.

There is a stronger relationship between nonspecific aspects of treatment and outcome than between so-called "active ingredients" (specific techniques and theories) and outcome.

The quality of the therapeutic relationship, especially that experienced early in treatment is predictive of patient engagement and treatment outcome. It has been estimated that between 50% and 60% of the variance in outcome is attributable to quality of the alliance between the client and the therapist. The therapeutic relationship contributes 5 to 10 times more to outcome than does the specific treatment model or the treatment approach that is used (Mee-Lee, 2010).

Another significant predictor of treatment outcome is the patient's subjective experience of improvement early in treatment. In some studies, the absence of improvement by the third session was predictive of drop out and poor treatment outcomes. As Mee-Lee et al., (2010 p. 401) highlight:

"The best way to improve retention and outcome is to attend to the client's experience of progress and the therapeutic relationship early in treatment. Use of Real-time monitoring of results allow for rapid and responsive modifications in the treatment plan and content"

What the patient brings to the therapy and what happens outside of treatment are also significant influences in treatment outcome.

CHANGE TALK PREDICTS TREATMENT OUTCOME

Thinking processes that are predictive of abstinence. What particular features of the patient's "story telling", or autobiographical reasoning, are predictive of who will maintain abstinence and evidence "lasting changes?"

These questions were addressed in a set of studies by Dunlop and Tracy (2013 a,b). They asked abstinent alcoholics to answer the following questions:

"Please think about the last time you drank alcohol and felt bad about yourself as a result. This might be a time when you slipped from your sobriety. Please describe in as much detail as possible what happened, how it made you feel, and what you did in response to this event?" (Dunlop & Tracey, 2013a, p. 58).

"What was the last time you were tempted to use and did not give into (resisted) the temptation? How did you handle this situation?" (Dunlop & Tracey, 2013b)

They found that how alcoholics answered these questions was predictive of their long-term abstinence. The "stories" about their last drink and resisting temptations by abstinent alcoholics that reflected autobiographical reasoning processes denoting self-change and self-stability were more likely to maintain abstinence, as well as accompanying higher levels of self-esteem, pride and mental health.

These self-redemptive narratives and "sobriety scripts" convey a set of controllability attributions and reflect a renewed motivation and a recovery trajectory. Their answers include efforts to achieve self-improvement. Their accounts include benefit-finding and benefit-remembering positive experiences. Those alcoholics who remained abstinent were more likely to use casual transitive verbs that reflect some effort to exert controls such as "notice, catch, game plan." For example:

"I can see what I did was wrong the last time and I can learn from it."

"My obsession with using lifted and I feel relieved."

"I have resisted my cravings before and I can do it again."

"My cravings in the past have passed and these will too."

"Having a craving is not a commandment to use."

In summary, humans are natural "story tellers." They construct stories to justify and explain their behavior of substance abuse. Stories bring a sense of comprehension and coherence to the events around them. They live the stories they tell. In turn, their behavior and resultant consequences influence the stories they tell. This bidirectional process can lead to an "addiction trap." How can therapists help patients become aware of this process and learn how to break this "addiction trap?"

CHANGE TALK

As a result of participating in treatment, the clients should begin to incorporate the following “language of change” into their narrative or “stories” and learn to use these phrases in an unprompted fashion. The clients should be able to employ the terminology of relapse prevention and offer multiple examples of each of these coping actions. They should be able to operate in a consultative mode being able to explain, teach and demonstrate these activities to others, and moreover, offer self-generated reasons why doing each of these activities is important to his/her recovery. As a result of treatment, the client should be able to indicate that ***“I can now...”***

IDENTIFY TRIGGERS

Analyze “near miss” episodes, so I can learn from them
 Catch myself before I fall off the wagon
 Identify high-risk situations ahead of time
 Increase awareness of unseen problems
 Pinpoint triggers, tell tale signs, watch out for warning signs
 Recognize when I am time-sliding back
 See how I stir up my feelings and frequently fuel my feelings
 Stay alert to my personal needs and people, places and things that put me at risk of using again
 Troubleshoot events ahead of time
 Turn off the CD in my head that leads to drinking (substance abuse)
 Watch out for what activates my “hibernating” (dormant) beliefs that lead to my drug use

COPE MORE EFFECTIVELY

Avoid getting blind-sided
 Avoid putting myself at risk
 Avoid tunnel vision
 Catch myself using “musts”, “shoulds”, “always”, “never”
 Change my moods without using drugs
 Change who I spend time with. Increase my association with non-substance abusing buddies.
 Structure my daily activities
 Check my 2 X 2 Grid of the pros and cons of using and not using drugs
 Check my coping cards that I keep in my wallet/purse
 Check out my beliefs
 Come to grips with my emotions
 Conduct a behavior chain analysis
 Go for hugs, not drugs
 Increase my tolerance for others
 Increase ways to get positive “healthy” reinforcers or “perks” in my life
 Maintain hope
 Perform personal experiments
 Plan ahead
 Refocus on what is really important in my life

Rein in my feelings
 Remind myself of what “*I have*”, what “*I can do*” and “*Who I am*”, besides someone who has been a drug user.
 Seek help when I need it
 Start using my coping plans and back-up plans if I need them.
 Stop being my own worse critic
 Stop “catastrophizing”
 Stop deluding myself
 Stop giving myself a “snow job”
 Stop my self-defeating behaviors
 Stop putting myself down all the time
 Stop sabotaging my treatment plan
 Stop setting myself up for failure
 Take pride in what I have accomplished
 Teach (explain, demonstrate) what I have learned in treatment to others and offer reasons why I now do these things
 Use my Clock Analysis (**12 o’clock- internal and external triggers; 3 o’clock – primary and secondary emotions; 6 o’clock – thinking processes and beliefs; 9 o’clock – behavior and consequences**)
 Use my game plan and back up strategies to cope with my urges and cravings

The clients should be encouraged to offer **commitment statements** of specific ways (how, where, when) they will engage in each of these activities, in spite of barriers, pressures, obstacles to perform, and most importantly, they should be encouraged/challenged to provide the **reasons why** engaging in such behaviors are important to achieving their treatment goals.

A sign of the clients’ commitment statement is the desire to which their accounts (“stories”) include examples of **change talk verbs**. Consider the following list of verbs that reflect self-efficacy.

TREATMENT GUIDELINES FOR ACHIEVING STABLE LASTING CHANGES

1. Establish, maintain and monitor the quality of the therapeutic alliance using session-by-session, or regular, treatment-informed feedback (FIT) in order to monitor patient progress and the “fit” with the therapist (treatment team). Visit the Website to download FIT tools. *(See www.centerforclinicalexcellence.com and Scott Miller on Melissa Institute Website.)*
2. Work to achieve and assess for treatment group cohesion and patient-to-patient support.
3. Be culturally-sensitive and gender-sensitive when providing services. Conduct gender-specific treatment programs and tailor interventions to issues of sexual orientation. Individualize the treatment protocol and assign a Case Manager to each patient. The quality of the therapeutic alliance is the most important predictor of the length of the treatment participation, engagement and treatment outcomes.
4. Use Motivational Interviewing Empathy-based procedures to increase patient treatment engagement. Focus on “change talk”. *(See www.motivationalinterviewing.org and <http://ctndisseminationslibrary.org/PDF/146.pdf>).*
5. Nurture patient HOPE by employing collaborative goal-setting using **SMART** goals (Specific, Measurable, Attainable, Realistic Timely goals). Use the language of possibilities and becoming “solution talk”. Incorporate meta-cognitive and RE verbs in social discourse.
6. Use Genograms and Time-Lines to help the patient identify “strengths” and evidence of resilience (“In spite of” behaviors). Nurture a coping resilient mindset in spite of vulnerability factors.
7. Use a Case Conceptualization Model of risk and protective factors and employ patient and significant other feedback. Assess the patient’s implicit theories of his/her addictive behavior and views of the treatment plans. Consider treatment alternatives of abstinence and harm reduction interventions.
8. Employ psycho-education that informs about both “addiction traps” and the impact of substances on brain/body, as well as information about neurogenesis and neuroplasticity of the brain. (“Rewire the brain” and “History is not destiny!”)
9. Use the CLOCK metaphor to educate the patient about the interconnections between his/her appraisal of external and internal triggers (12 o’clock); accompanying primary and secondary emotions (3 o’clock); accompanying thoughts and thinking processes (6 o’clock); and behaviors and resultant consequences (9 o’clock)?

10. Help the patient to appreciate how they inadvertently, unwillingly, and perhaps, unknowingly contribute to their present problems. How they contribute to a “vicious cycle” and focus on the mindset and constructive narrative (“stories” patients tell themselves and others and accompanying behavior).
11. Teach and strengthen emotion and self-regulation skills such as distress tolerance, managing cravings, chronic pain and learn ways to engage in positive resilient-engendering emotions and accompanying self-care, empowering activities. Implement generalization guidelines before, during and after skills training.
12. Put the patient in a consultative role using Patient Checklists and Post Treatment Recovery Checklist. Include Self-attribution training procedures (“taking credit” for behavioral changes - - “nurture ownership”).
13. Employ medication-assisted treatment (MAT), where indicated. Address issues of treatment non-adherence throughout.
14. Involve significant others, like family members whenever possible. Conduct a network analysis, as part of Relapse Prevention procedures. Provide peer support recovery specialists, if possible.
15. Incorporate Relapse Prevention procedures, conducting a trigger analysis, behavioral chain analysis, potential barrier analysis, and preparing skills training. Focus on potential therapy-interfering behaviors. Consider “unsafe for recovery” settings and plan with the patient accordingly.
16. Provide Integrative treatment to address the impact of co-occurring disorders. Use evidence-based interventions and beware of HYPE in the field.
17. Incorporate the patient’s spirituality (religion, faith, participation in various forms of treatment like 12 Step AA and Smart Recovery into intervention. (See Meichenbaum “Trauma, spirituality and recovery” on the Melissa Institute Website).
18. Provide Active Aftercare and ongoing group interventions. Include follow-up assessment and Booster sessions to address any “unfinished business.” Engage the patient with a community of “successful” patients. Provide access to computer-assisted resources.
19. Conduct a collaborative detailed comprehensive discharge planning, anticipate high-risk situations. View any lapses as a “learning opportunity.” Help patients learn to “fail successfully.”
20. Provide wrap-around services to address the multiple needs of patients such as back-to-work programs, parenting and academic skills training. Treat the “whole” person, not just addiction problems.

21. Engage other health care providers as follow-up therapeutic agents, both professional and non-professional facilitators. Use the Case Conceptualization Model and Feedback-informed Treatment, as a mode of communication.
22. Where indicated, help patients find safe drug free living circumstances (eg., Halfway housing, College safe Haven settings). Assess the “social capital” and “recovery capital” of the community to which the patient will return.
23. Obtain patient feedback (“exit” interviews) and treatment satisfaction feedback and ask for ways the treatment program can be improved. Maintain ongoing feedback with the patient. Encourage the patient to be a “collaborator.”

PHASE-ORIENTED INTEGRATIVE TREATMENT APPROACH

INITIAL PHASE

- 1. Develop, maintain and monitor therapeutic alliance. Use session-by-session Feedback-Informed Treatment and similar patient feedback measures.**
- 2. Conduct Initial Assessment and conduct ongoing assessments**
 - a. Polysubstance abuse**
 - b. Comorbidity assessment from a life-span perspective**
 - c. Risk assessments toward self and others**
 - d. Assess for evidence of strengths and signs of resilience**
 - e. Assess from a Constructive Narrative Perspective: “Addictive and Redemptive Stories”, and Reasons for noncompliance**
- 3. Use Three Tile-Lines:**
 - Time Line 1 - - History of Addictive and Co-occurring Disorders and Interventions**
 - Time Line 2 - - “In spite of” resilient behaviors**
 - Time Line 3 - - Focus present and future**
- 4. Use Case Conceptualization Model (CCM) of Risk and Protective Factors: Have the patient fill this out. Maintain Progress notes using CCM.**
- 5. Use Motivational Interviewing: Use the “Art of Questioning.”**
- 6. Engage in Collaborative Goal-setting. Establish SMART goals (Specific, Measureable, Attainable, Relevant, Timely). (“As yet”, “So far”).**
- 7. Conduct Psychoeducation**
 - a. Discuss the impact of the use of substances: “Addictive Trap”**
 - b. Discuss the role of resilience - - “plasticity”: Use language of possibility (“As yet”, “So far”) and RE Active Verbs.**
 - c. Use CLOCK Metaphor**

- i. 12 o'clock - - external and internal triggers
- ii. 3 o'clock - - primary and secondary emotions
- iii. 6 o'clock - - automatic thoughts, thinking style, schemas and beliefs
- iv. 9 o'clock - - behaviors and resultant consequences

These contribute to a “Vicious Cycle.” Question “Toll, Impact, Price” patient and others pay. Consider ways to “Break the Cycle.”

- d. Discuss ways in which PTSD and Substance Abuse go hand-in-hand ala Najavits.
8. Address ways Psychoeducation and Collaborative Goal-setting can be conducted on a Group basis: Use CLOCK metaphor and “Conversation Starters.”
 9. Engage the patient in Self-monitoring: Contribute to skills training.

PHASE II- SKILLS BUILDING AND CONSOLIDATION

1. Help the patient develop Intra-and Interpersonal Skills and ways to bolster resilience.
 - a. Emotion self-regulation skills and “build and broaden” positive emotions.
 - b. Identify Triggers and develop urge-surfing skills.
 - c. Mindfulness and relaxation training.
 - d. Interpersonal communication skills and social network associations.
 - e. Refusal skills training
 - f. Ways to bolster resilience
(see www.roadmaptoresilience.com)
2. Incorporate Generalization Guidelines: Do not “train and hope” for transfer and maintenance.
3. Engage significant others, where indicated (e.g., Couples, Family and Peers involvement).
4. Discuss Role of 12 Step AA programs (See Checklist) and other possible programs such as SMART Recovery and Community-based supports.
5. Integrate spiritually and religiously-based interventions, where indicated.

6. Integrate skills and Treatment of Co-occurring Disorders such as PTSD.

- a. Cloitre - - STAIR-MPE
- b. Ford - - TARGET
- c. Najavits - - SEEKING-SAFETY

Use various exposure-based interventions, Cognitive restructuring, Restorative Retelling (Gestalt “Empty Chair” Procedures).

7. Help patients develop SOBRIETY SCRIPTS and accompanying coping skills.

PHASE III - - STEPS TOWARD DEVELOPING “LASTING CHANGES”

- 1. Conduct Relapse Prevention Training**
- 2. Engage the patient in Self-attributional training (“Taking Credit”).**
 - a. Use Patient Checklist
 - b. Use Active Verbs that reflect meta-cognitive abilities.
 - c. Put the patient in a “consultative” role: (Describe, Demonstrate, Teach, Own skills and express commitment and enumerate Reasons why and when and where to use coping skills. How to anticipate “high-risk” situations (“triggers”), game plan and back-up plan.)
- 3. Have patient Revisit his/her Case Conceptualization and “retell” story.**
- 4. Have patient complete Patient Satisfaction Measures and solicit suggestions for improvement of treatment.**

PHASE IV - - ACTIVE FOLLOW-UP PROCEDURES

- 1. Build in active follow-up Booster Sessions.**
- 2. Focus on transition skills such as job skills and role responsibilities.**
- 3. Help the patient reclaim a life worth living, and engage in meaning-making skills (“Making amends”; forgiveness skills toward self and others; altruistic behaviors (“Give to Get”), and the like.**
- 4. Engage in Active Case Management.**

MEDICATION-ASSISTED TREATMENT (MAT): PHARMACOTHERAPY FOR ADDICTIVE DISORDERS

There is much controversy over the use of medication-assisted treatment, especially for those who experience opioid addiction. A survey of some 3000 residential treatment programs indicates that only 49% use any medication-assisted intervention. This is in part due to a commitment to a total abstinence based treatment on the part of the treatment staff and the patients' beliefs that such treatment is "merely replacing one addiction with another". The accompanying belief is that this will lead to a wholly pharmaceutical solution to addiction.

Where indicated, the use of medication-assisted treatment requires a three-phased psychoeducational approach with patients.

Phase I. - - A collaborative non-judgemental, supportive discussion with the patient and significant-others (family members) about:

- a) their implicit notions or theories about the causes of their addiction and what is needed to change;
- b) their history of treatment in terms of efficacy, adherence and satisfaction;
- c) their present motivation and willingness to engage in treatment? (Use Motivational Interviewing and Collaborative goal-setting procedures).

Phase II. If M.A.T. is to be considered then use the analogy of **Diabetes** to convey the need to combine glucose monitoring procedures with the use of the drug Insulin to treat Type I and Type II diabetes. Underscore that medication-assisted treatment needs to be supplemented with psycho-education behavioral interventions (diet, exercise, life-style changes, foot care, and other procedures) in order to be effective. Addictive disorders, like diabetes, require a complex, interactive treatment approach to achieve "lasting" changes.

Phase III. Educate the patient and family members about the various pharmaceutical treatments and the potential benefits. Address issues of treatment nonadherence and how the medications will be integrated with evidence-based trauma-informed interventions.

M.A. T. treatment for opioid dependence include Buprenorphine, also known as Suboxone (a partial agonist) often combined with Naloxone, and with an injectable naltrexone also known by the brand name Vivitrol (an antagonist). It blocks the brain's opioid receptors preventing a high in patients who try to use opioids while on it. Vivitrol requires a 10 to 14 day abstinent period from opioid use before it can be administered. Methadone, also an agonist, has also been found to be as equally effective as Buprenorphine. These drugs work by easing withdrawal symptoms relative to placebo treatment.

Treatment must last, on average for at least 3 months to produce stable behavior change.

Some hospitals are administering opioid treatment in ER. They provide buprenorphine around the clock to people. A single ER visit can provide 24 to 48 hours of withdrawal suppression, as well as suppress cravings. Addicts report that even such brief respite can nurture hope. "It shows that there is a pathway back to feeling normal." Such ER interventions need to

be followed with Addiction Treatment Services. There is a need to highlight that smoking can hinder recovery.

Unfortunately, such Medication-assisted Treatment is underutilized. "The good news is that with abstinence from substances, the brain heals and it can look normal again." Lisa Najavits (National Institute of Drug Abuse, 2014, Drugs, brain and behavior.
www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/treatment-recovery)

When discussing with patients about MAT convey what happens to the brain with recovery (Abstinence). There are changes in the communication system, as well as changes in the structure and function of the brain. Remind them of the concept of “neurogenesis” and “neuroplasticity”. With recovery and abstinence, there is :

- a) an increase in neurometabolites;
- b) an increase in regional brain volume;
- c) an increase in hippocampial volume resulting in improved short-term memory and visual long-term memory;
- d) improved cognitive functioning and IQ improvement, contributing to better social relationships

EVIDENCE OF REILIENCE

“In spite of behaviors”

Resilience is positive adaptation despite adversity. Some facts about resilience.

1. Individuals can be resilient at one time in their lives, but not at other times. For example, the so-called “skin-deep” resilience in African American males.
2. Resilience is not an all or none phenomenon. Individuals can be resilient in one area of their lives, but not in other areas of their lives.
3. Resilience (positive emotions) and trauma reactions (negative emotions) can coexist, side-by-side.
4. Resilience does not come from rare, special or extraordinary qualities or processes. Resilience develops from the “everyday magic of ordinary resources.” Resilience is not a sign of exceptional strengths, but a fundamental feature of everyday coping skills (Masten, 2014).
5. Resilience rests fundamentally on relationships. Attachment figures act as regulators of stress and provide a secure base. Bystanders provide “social capital”, nurture an adaptive capacity, and provide a sense of security. They foster mastery motivation and a sense of self-efficacy.
6. Resilience-engendering behaviors and positive emotions such as optimism, gratitude, forgiveness, awe, and the like, can contribute to positive neurobiological changes (brain chemistry and structural alterations), and even impact gene expression.
7. Resilience is more accessible and available to some people than for others, but everyone can strengthen their level of resilience and “islands of competence”.

POSSIBLE MEDIATING MECHANISMS

- Exposure to multiple diverse traumatic victimizing experiences can alter brain architecture and function, derail developmental “wear and tear” on the body.
- Neurobiological changes resulting from exposure to ACE include alterations to the amygdala, hippocampus, anterior cingulate prefrontal cortex, nucleus accumbens, and at the neurochemical level alterations including dopamine, norepinephrine, epinephrine, cortisol, serotonin brain-derived neurotrophic factor, endocannabinoids, glutamate and neuropeptides.
- When a child experiences adversity early in life their monocytes and macrophages (types of white blood cells) become calibrated to respond to future threats with a heightened pain inflammatory response, and by influencing the hormonal system and dysregulation of cortisol levels.
- Traumatic stress may alter the organization and “tuning” of multiple stress response systems, including the immune system, the autonomic system and the hypothalamic-pituitary-adrenal (HPA) axis and alter gene expression. For example, childhood maltreatment sensitizes the amygdala to over respond to threat.
- Childhood adversity has been associated with shorter telomeres. Telomeres are repetitive DNA sequences that cap and protect the ends of chromosomes from DNA damage and premature aging.
- In terms of the developing brain, exposure to cumulative adverse events contributed to:
 - a) Reduction in the volume and activity levels of major structures including the corpus callosum (connective fibers between the left and right side of the brain), limbic system (amygdala and hippocampus) that is involved in emotional regulation.
 - b) Cerebral lateralization differences or asynchrony. Abused children are seven times more likely to show evidence of left hemisphere deficits.
 - c) Impact the communication between the Prefrontal Cortex (PFC) (upper portion of the brain) and the Amygdala (lower portion of the brain). The “top-down” regulation of executive skills can be compromised by perceived threats and stressors.

The bottom-up emotional processes (amygdala) can “hijack” the PFC.

- The earlier and the longer the exposure to cumulative ACE, the greater the neurological impact.

THE NATURE OF RESILIENCE

Resilience is the ability to adapt and thrive despite experiencing adversities. It reflects the ability to “bounce back” following traumatic and victimizing experiences.

Resilience and posttraumatic stress can coexist. Individuals may be resilient in one domain and not in others, or they may be resilient at one time period and not at other periods of their lives.

Such psychological processes as positive emotions, optimism, active coping, social supports and prosocial behaviors, meaning making, humor, and exercise can foster and support resilience and reduce the intensity and duration of stress responsivity. Such positive activities are associated with reduced HPA axis reactivity. The impact of positive emotions is cumulative; repeated positive emotional experiences over time prime the system for optimal response to negative stimuli by expanding physical, psychological, intellectual and social resources (Fredrickson, 2001). There is a protective capacity of positivity.

NEURO-PSYCHOLOGICAL MECHANISMS THAT NURTURE RESILIENCE

1. Reframing/Reappraisals is the ability to frame events in a relatively positive light. Functional MRI studies have shown increased activation in the lateral and medial prefrontal cortex regions and decreased amygdala activation during reappraisal. The increased activation in the lateral prefrontal cortex (the “executive” center) helps modulate the intensity of emotional responses and keeps the amygdala in check. Resilient individuals are better able to extinguish and contextualize traumatic emotional memories and can more readily retrieve positive memories.
2. Use of Humor is a way to engage in cognitive reappraisal and emotion regulation. A network of subcortical regions that constitute core elements of the dopaminergic reward system are activated during humor.
3. Optimism is the inclination to adapt the most hopeful interpretation of the events which influences emotion regulation, contributes to life satisfaction, and increases psychological and physical health. An optimistic future-oriented outlook has been associated with increased activity in the amygdala and anterior cingulate cortex. For instance, optimists have lower rates of dying after cardiovascular disease over 15 years, compared to pessimists.

As Southwick and Charney (2012, p. 25) observe, “optimism serves as the fuel that ignites resilience and provides energy to power the other resilience factors”. But it is realistic optimism that works best, whereby individuals pay close attention to negative information, and not blind optimism that does not work.

4. Active goal-directed problem focused coping of taking direct actions when stressful life events are potentially changeable can increase neurotransmission in the mesolimbic dopaminergic pathways that increase pleasurable feelings and that stimulate reward centers such as the ventral striatum. Dopamine release in the brain leads to “openness to

experience”, exploratory behaviors, and to the search for alternatives. A form of active coping is to engage in Behavioral Activation (physical exercise) which has positive effects on mood such as depression and that promotes resilience and neurogenesis. Exercise increases the level of serotonin, norepinephrine, dopamine and by stimulating the reward circuits in the brain. Exercise has also been shown to increase the size of the hippocampus and serum levels and increase brain volume (prefrontal cortex), especially among the elderly.

In some instances, when stressful events are not changeable, the use of emotional-palliative coping strategies such as acceptance, distraction, spirituality are the best ways to cope.

5. Prosocial behaviors and social supports and social competence, altruistic behaviors, helping others, and empathetic capacity facilitate resilience. The neuropeptides oxytocin, and vasopressin have been found to increase trust, compassion and enhance the reward value of social stimuli. Cortical “mirror neurons” have also been implicated in the regulation of positive emotions and can reshape the circuitry responsible for resilience. They play a role in facilitating social interactions by promoting shared understanding and empathy.

For example, compassion contributes to an increase in the level of endorphins, endogenous cannabinoids, endogenous morphine, dopamine, vasopressin, nitric acid, and oxytocin. In addition, the stimulation of the Autonomic Nervous System (ANS) engenders compassion, as compared to negative emotional distress. Compassion also triggers an orientation response and accompanying heart rate deceleration tied to respiratory sinus arrhythmia, heart rate variability and reduced startle responses and skin conductance (vagus nerve response), as well as triggering “mirror neurons”. Resilient individuals are better able to bond with others and attract social support.

Low levels of social support have been linked to increased rates of depression, anxiety and PTSD. In a 9 year prospective study, individuals with no or few social supports had 1.9 to 3 times the risk of dying from a variety of illnesses, including cancer, cerebrovascular and cardiovascular diseases, as compared with those who had optimal social supports (Malta, 2012). Among the elderly, loneliness is a strong predictor of early morbidity and has the same predictive power of smoking and lack of exercise.

Helping individuals increase their social supports and engaging in caregiving activities trigger the immune system to respond positively and stimulate the reward circuits along the medial forebrain bundle and engages dopaminergic neurons. Various hormones and neuropeptides like oxytocin and vasopressin facilitate social engagement and increase adaptation to stress by increasing empathy, eye contact, social cognition and problem-solving skills. Such positive attachment relationships buffer physiological stress responses.

6. Meaning-making is another strategy that can buffer against negative feelings and is associated with resilience. Having a role model who provides a “guiding light” and

developing and following a personal “moral compass”, holding spiritual beliefs, and engaging in religious faith-based practices bolster resilience and facilitate recovery. For example, consider the experiences of Jerry White (2008), who lost limbs to landmine explosions and who founded Landmine Survivors Network, which later became the Survivor’s Corp. It is designed to foster a mindset of “Survivorship”, which he defines as “choosing to live positively and dynamically in the face of death, disaster and disability; a form of meaning making. His approach is designed to combat the development of a “victim mentality” where individuals tend to pity themselves, resent their circumstances, live in the past and blame others. White believes that a victim-minded person is generally inflexible, stuck in his or her grievances, and is seemingly unable to let go, find hope, or move forward. Over time, a victim’s intense focus is on their own personal suffering which can interfere with his or her ability to take positive action, relate to others in a healthy manner, or participate more fully in daily life.

White proposes five steps to help trauma survivors to tap their innate resilience and grow stronger.

1. Face facts: acknowledge and accept what has happened, the suffering and loss. Find a way to live with it and piece together a “personal story”.
2. Choose life: live for the future, not in the past.
3. Reach out: connect to others who have “been there”. Reach out to peers, friends and family.
4. Get moving: set goals and take action for a healthy recovery. Develop an individual action plan and identify your life priorities. Each step engenders hope and builds self-confidence. Regularly evaluate your progress and when needed re-evaluate and change one’s objectives. Such individual action plans are a contract of sorts with oneself and with others.
5. Give back: be thankful for what you do have. Contribute to others and to your community. Express gratitude - - thanking people who have helped. Express generosity - - giving back more than taking. Move from being a beneficiary to a benefactor.

In summary, the experience of positive-balanced emotions such as optimism, joy, pride, contentment, compassion, love, forgiveness, gratitude, humor have been associated with distinct neurobiological and psychological changes that provide a protective capacity. The positive emotion of awe, which reflects positive feelings of being in the presence of something vast that transcends our understanding of the world contributes to altruistic behaviors and to a sense of community. Awe helps shift one’s focus from a narrow self-interest to the interests and well-being of a group to which individuals belong. Sights and sounds of nature, collective rituals, artistic events of music and dance elicit positive emotions that have behavioral and physiological sequelae. These neurobiological responses include:

Increase of neurotransmitters like cortisol levels that facilitate pathway communication between Prefrontal Cortex (PFC) and subcortical systems like the amygdala. For instance, GABA (gamma amino butyric acid) which is an inhibiting neuropeptide made in the orbitomedial PFC (OBPFC) when released “turns down” the alarm system of the amygdala. The left PFC, a site associated with positive emotions such as happiness, is more activated during Compassion Meditation.

These positive emotions reduce physiological arousal and broaden and build an individual’s focus of attention, allowing more creative inclusive, flexible, integrative perspective taking, engenders positive reappraisal of difficult situations, fosters problem-focused coping, and facilitates the infusion of ordinary events with meaning. Fredrickson et al. (2002, 2008), in her Broaden-and-Build Theory, highlights that the impact of positive emotions is cumulative. Repeated positive emotional responses to negative events expands and builds psychological and behavioral resources. (Also see Carl et al., 2013; Fava and Ruini 2003, Well-being therapy; James et al., 2013, McEwen, 2007; Ochner and Cross, 2008; Russo et al, 2012; Southwick et al., 2011).

IMPLICATIONS FOR CONDUCTING PSYCHOTHERAPY

The research on neurobiology of resilience underscores the value of conducting psychoeducation on neuroplasticity (the power of the human brain to change and repair itself) and the potential recovery from experiencing traumatic and victimizing experiences. The therapist can help clients learn a variety of skills and engage in activities that bolster positive emotions and improve resilience and health (Ray, 2012).

When discussing with clients the lingering impact of traumatic and victimizing experiences, the therapist can convey examples of how the body “keeps score” and the enduring impact on the clients brain and behavior. The good news, however, is that the brain is a remarkable resilient organ and clients have the potential ability to reverse this process. Clients can learn to capitalize and build upon what is called neuroplasticity, and moreover, even begin to “turn on” and “turn off” the genes in their body (neurogenesis).

The therapist can say: ***“Let us begin by having you better appreciate the possible impact that traumatic and victimizing experiences may have on your brain and behavior. Traumatic events and losses can lead the lower part of your brain that is the emotional center to:***

“hijack; overwhelm; flood; overshoot; ramp up; exceed; trigger action pathways; overactivate and have a spiraling, cascading snowball effect; prime or kindle; shorten your fuse; and undermine and shut down the upper part of your brain, the frontal lobe executive control center.”

When conducting this psycho-education, the therapist should choose one or two of these illustrative verbs to describe the impact of traumatic and victimizing experiences and accompanying losses. Do not overwhelm the client. The therapist should then solicit personal examples from the client that reflects that activity.

“Can you give me an example of how you did X?” (Choose one of the following).

“Magnified your fears; time slide back to your old ways of coping that once worked for you; went into a kind of autopilot mode of survival; engaged in safety behaviors; were hypervigilant and constantly on the lookout for possible threats; repeatedly conducted a kind of after action analysis in the form of ruminating; had difficulty sleeping; sought an adrenaline-rush by engaging in high-risk behaviors; used booze or drugs to self-medicate?”

The therapist can convey to the client that he/she noticed, and wondered if the client also noticed, these behavioral patterns and “What is the impact, toll and price that resulted?” After discussing such consequences and how they may interfere with achieving the treatment goals, the therapist can convey that the therapy can help the client learn how to: **(Choose one)**

“regulate, modulate, control, strengthen, regain, restore, reprogram, reshape, re-right myself, re-establish, re-define, mobilize, adapt, calibrate, blunt, improve their error detection skills; soothe, down-regulate, label and tame emotions, surmount your fears, orchestrate, get accustomed, accepted, organize your

traumatic memories into a narrative account, develop coherent redemptive stories that have a beginning, middle and ending, note what you have done to survive, contextualize and put the landmark traumatic events into a larger autobiographical account.”

The therapist can highlight that attention and increased awareness are the key first steps in the ability of the brain to repair itself. The client can learn how to “talk back” to the amygdala or the lower part of the brain and take charge once again. For instance, clients can learn emotion-regulation skills and they can come to tell themselves (and others):

“I can rewire my brain.”

“I can talk to my amygdala (the alarm center) and train my emotional brain.”

“Not allow my amygdala to hijack my frontal lobes.”

“I can use the upstairs part of my brain to calm down the downstairs part of my brain.”

“My positive emotions can Re-shape my brain.”

“Positive relationships that I have can switch on and off different gene contributions and leave a positive chemical signature on my genes that affect my brain development.”

“By being kind I can raise my level of oxytocin which curbs stress-induced rises in heart rate and blood pressure and that reduces feelings of depression. Being kind protects my heart.”

“I can reduce my heart rate by 6 to 10 beats per minute by taking slow deep (diaphragmatic) breaths.”

“I remind myself that my brain is not fixed, nor static. It is highly plastic and flexible. It can repair itself, with my help.”

“As with other parts of my body, I need to use my brain or lose it.”

“If I don’t stimulate my brain, my brain cells will die and be pruned away.”

“I have the capacity to bend, but not break.”

“I can see the big picture and find the silver lining, and develop a new normal.”

“I can get myself to do what I do not feel like doing and get myself out of my comfort zone.”

INTERVENTION STRATEGIES THAT BOLSTER RESILIENCE

(See Meichenbaum's Roadmap to Resilience book for examples)

Use Physical exercise - - Behavioral Activation and use Active Coping Strategies (See McNally, 2007).

Use Emotional Regulation and Tolerance Skills and Increase the Protective Capacity of Positivity that Buffers Negative Feelings (See Kim & Humann, 2007).

Focus and savor positive emotions and ruminations, past (reminiscence) and anticipate positive emotions (anticipating). Engage in goal setting and affective forecasting in the form of positive future-oriented imagery that nurtures hope. Avoid “dampening” or minimizing positive events (“*I don’t deserve this.*” “*This won’t last*”).

Engage in Mindfulness Exercises - - pay attention in a particular way, on purpose in the present moment, and nonjudgmentally (See Chiesa et al., 2013; Salzberg, 2011).

Engage in Loving-kindness Meditation and engage in Acts of Kindness

Engage in gratitude exercises (“Give back and pay forward”).

Engage in Forgiveness exercises Toward others and Toward One-self - - Compassion is the awareness of the suffering of others and oneself, coupled with the wish and effort to alleviate it.

Engage in Meaning-making Activities and Cognitively Reappraisal (“Healing through meaning”)

Use Spiritual-related Activities- - Use of One’s Faith and engage in communal religious activities (See Meichenbaum “Trauma, spirituality and recovery” on Melissa Institute Website)

Increase Social Supports - - keep interpersonally fit by participating in positive activities; selectively choosing and altering situations, improving self-presentation (smiling, dressing up), improving communication skills and accessing social networks (See Uchina et al., 1996).

Use humor, Have fun and build-and-broaden Positive Emotions (“Bucket List Activities”)

Each of these Activities will help bolster resilience by increasing the accompanying neurobiological processes. There is increasing data that a course of psychotherapy- even without medication- had measurable physical consequences in the brain.