TREATING THE COMORBIDITY OF ALCOHOL/SUBSTANCE USE DISORDER & MENTAL HEALTH DISORDERS

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LEARNING OBJECTIVES

After this presentation, participants will be better able to
1. Identify the different conditions which are comorbid with substance use disorders
2. Identify the brain and neurological functions which lie as the cause of these comorbidities
3. Identify tools to assess for these comorbidities
4. Identify treatment tools to treat these comorbidities
5. Identify existing free Apps which can be used in treating these conditions
6. Identify why it is impossible to think just treating one condition in isolation from the other comorbidities would have maximal effectiveness for the patients who are suffering with them
Co-occurring Substance Use Disorder and Mental Health Disorder According to DSM-5
SUBSTANCE/MEDICATION-INDUCED DISORDER

8 Mental Health Disorders have Substance/Medication Induced Disorders

1. Schizophrenia Spectrum and Other Psychotic Disorders
2. Bipolar and Related Disorders
3. Depressive Disorders
4. Anxiety Disorders
5. Obsessive Compulsive and Related Disorders
6. Sleep-Wake Disorders
7. Sexual Dysfunctions
8. Neurocognitive Disorders
<table>
<thead>
<tr>
<th>Mental Health Disorder</th>
<th>Substance/Medication Inducing Comorbid Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>Alcohol, Cannabis, Phencyclidine, Hallucinogens, Inhalants, Sedatives, Amphetamines &amp; Cocaine</td>
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<tr>
<td>Bipolar Disorder</td>
<td>Alcohol, Phencyclidine, Hallucinogens, Sedatives, Amphetamines &amp; Cocaine</td>
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<tr>
<td>Depressive Disorder</td>
<td>Alcohol, Phencyclidine, Hallucinogens, Inhalants Opioid, Sedatives, Amphetamines &amp; Cocaine</td>
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<tr>
<td>Anxiety Disorder</td>
<td>Alcohol, Caffeine, Cannabis, Phencyclidine, Hallucinogens, Inhalant, Opioid, Sedative, Amphetamine &amp; Cocaine</td>
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<tr>
<td>Obsessive Compulsive Disorder</td>
<td>Amphetamines &amp; Cocaine</td>
</tr>
<tr>
<td>Sleep-Wake Disorder</td>
<td>Alcohol, Caffeine, Cannabis, Sedative, Amphetamine, Cocaine &amp; Tobacco</td>
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<tr>
<td>Sexual Dysfunction</td>
<td>Alcohol, Opioid, Sedative, Amphetamine &amp; Cocaine</td>
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<tr>
<td>Neurocognitive Disorders</td>
<td>Alcohol, Cannabis, Phencyclidine, Hallucinogens, Inhalant, Opioid, Sedative, Amphetamine &amp; Cocaine</td>
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</tbody>
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## Likelihood of Substance Use Disorders in People with Mental Health Disorder

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Odds Ratio</th>
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</thead>
<tbody>
<tr>
<td>Bipolar Disorder</td>
<td>6.6</td>
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<tr>
<td>Schizophrenia</td>
<td>4.6</td>
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<tr>
<td>Panic Disorder</td>
<td>2.9</td>
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<tr>
<td>Major Depression</td>
<td>1.9</td>
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<tr>
<td>Anxiety Disorder</td>
<td>1.7</td>
</tr>
</tbody>
</table>

SIGNIFICANT SYMPTOMS OF SUBSTANCE USE DISORDERS IN PATIENTS WITH MENTAL HEALTH DISORDER

• Enhanced reinforcement
• Mood Change
• Escape
• Hopelessness
• Poor Judgment
• Inability to appreciate consequences
RESULTS OF SUBSTANCE USE DISORDER WITH MENTAL HEALTH DISORDER

- Lower medication adherence
- Greater chance relapses
- Increased hospitalizations
- Homelessness
- Suicide
LET’S LOOK AT OUR FIRST CASE

Case #1 Jennifer
JENNIFER’S DIAGNOSIS

**Principal Diagnosis**

303.90 (F10.20) Alcohol Use Disorder (severe) in sustained remission (p.490)

296.46 (F31.74) Bipolar I Disorder Current or most recent episode manic in full remission (p.126)

291.89 (F10.24) Substance/Medication Induced Bipolar Disorder with Alcohol Use disorder severe (p.142)

292.84 (F19.24) Substance/Medication Induced Bipolar Disorder with unknown substance Use disorder severe (p. 143)

**Provisional Diagnosis**

None

**Other Conditions That May Be a Focus of Clinical Attention**

995.85 (T74-01XA) Spouse or Partner Neglect Confirmed Initial Contact (p.721)

995.82 (T74-31XA) Spouse or Partner Abuse, Psychological Confirmed Initial Contact (p.721)

V62.9 (Z65.9) Unspecified Problems Related to Unspecified Psychosocial Circumstances (p.725)

V15.89 (Z91.89) Other Personal Risk Factors (p.726)

V69.9 (Z72.9) Problems Related to Lifestyle (p.726)

V71.01 (Z72.811) Adult Antisocial Behavior (p.726)

V15.81 (Z91.19) Nonadherence to Medical Treatment (p.726)
The frequency with which individuals who have bipolar disorder also suffer from substance abuse is very high. In fact, it leaves little doubt that there is a link between the two although it is not yet known which condition leads to the other. It is estimated that approximately 60% of all individuals with bipolar disorder also abuse substances.

When both conditions are seen in an individual it can lead to three different types of complications. These include:

1. Problems in diagnosing the bipolar disorder
2. The substance mimics the symptoms of bipolar disorder (e.g. severe mood swings) leading to a misdiagnosis
3. The substance has adverse effects on the treatment for the bipolar disorder
INCREASE OF IMPULSIVITY WITH COMORBID BIPOLAR & SUBSTANCE USE DISORDER

• Trait impulsivity is increased additively in bipolar disorder & substance abuse
• Performance impulsivity is increased in Interepisode bipolar disorder only if a history of substance abuse is present
• This increased predisposition to impulsivity when not manic may contribute to the decrement in treatment outcome & compliance & increased risk for suicide & aggression, in bipolar disorder with substance abuse

MODELS OF COMORBID SUD & MENTAL HEALTH DISORDER TREATMENT

1. **Sequential** – Treat SUD first then Mental Health Disorder
2. **Parallel** – Treat both at same time but within different treatment modalities
3. **Integrated** – Treat both at same time within the same treatment modality
INTEGRATED TREATMENT MODEL OF TREATMENT OF COMORBID DISORDERS WITH BIPOLAR DISORDER

• Cognitive-behavioral model focuses on parallels between the disorders in recovery/relapse thoughts and behaviors
• Explores the interaction between the two disorders
• Utilizes a single disorder paradigm: “bipolar substance abuse”
• Uses a “Central Recovery Rule”
FOCUS OF INTEGRATED MODEL

• Dealing with the Mental Health Disorder without use of Alcohol &/or Drugs
• Confronting denial, ambivalence, acceptance
• Monitoring overall mood during each week
• Emphasis on compliance in taking psychiatric medications
• Identifying & fighting triggers
• Emphasis on “wellness” model of good night’s sleep, balance nutritional intake & exercise
PARALLELS IN RECOVERY & RELAPSE THINKING BETWEEN COMORBID DISORDERS

• “May as well thinking” vs. “It matters what you do”
• Abstinence violation effect vs. stopping taking psychiatric meds when anxious or depressed
• Recovery thinking vs. relapse thinking & acting out
• Remember: you’re always on the road to getting better or getting worse: “It matters what you do!”
THE CENTRAL RECOVERY RULE

No matter what

- Don’t drink
- Don’t use drugs
- Take your medication as prescribed

No matter what

Using DSM-5 Trauma Focused Therapeutic Diagnosis for Comorbid Condition with Substance Use Disorder
TRAUMA AND STRESSOR RELATED DISORDERS COMORBID WITH SUBSTANCE USE DISORDERS

1. PTSD for Adults, Teens, Children & Preschool Children
2. Acute Stress Disorder
3. Adjustment Disorders
TRAUMA FOCUSED THERAPEUTIC DIAGNOSIS & TREATMENT PLANNING

You Need to Identify:
• Adverse Childhood Experience (ACE Factors) Screening
• DSM-5 for Principal and Provisional Diagnoses
• Identifying Other Condition That May be a Focus of Clinical Attention
ADVERSE CHILDHOOD EXPERIENCES (ACE FACTORS)

**ABUSE**
1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse

**Neglect**
4. Emotional Neglect
5. Physical Neglect

**Household Dysfunction**
6. Mother was treated violently
7. Household substance abuse
8. Household mental illness
9. Parental separation or divorce
10. Incarcerated household member
IDENTIFY DIAGNOSIS BASED ON TRAUMATIC EVENTS &/OR ACE FACTORS

• Principal
• Provisional
• Other Conditions that May Be a Focus of Clinical Attention
UTILIZE TRAUMA FOCUSED EVIDENCED BASED PRACTICES

Prolonged Exposure Therapy
Cognitive Processing Therapy

In addition to Therapeutic Plan to address Principal Diagnosis of the Comorbid Substance Use Disorder
LET’S LOOK AT OUR SECOND CASE

Case 2: Alexia
Relevant ACE Factors for Alexia (Adverse Childhood Experiences)

**Abuse**
- X 1. Emotional Abuse
- X 2. Physical Abuse
- X 3. Sexual Abuse

**Neglect**
- X 4. Emotional Neglect
- X 5. Physical Neglect

**Household Dysfunction**
- 6. Mother was treated violently
- X 7. Household substance abuse
- X 8. Household mental illness
- 9. Parental separation or divorce
- 10. Incarcerated household member
TENTATIVE DIAGNOSIS

Principal Diagnosis
309.81 (F43.10) Posttraumatic Stress Disorder (p.271)
3296.33 (F33.2) Major Depressive Disorder, Recurrent Episode (Severe) (p.162)
04.20 (F14.20) Stimulant Related Disorder, Crack Cocaine (p.562)
303.90 (F10.20) Alcohol Use Disorder (severe) (p.490)

Provisional Diagnosis
291.82 (F10.282) Substance-Medication-Induced Sleep Disorder, Alcohol, (Severe) (p.415)
292.85 (F14.282) Substance-Medication-Induced Sleep Disorder, Cocaine, (Severe) (p.417)
Other Conditions That May Be a Focus of Clinical Attention

V61.20 (Z62.820) Parent Child Relational Problems (p.715)
V61.10 (Z63.0) Relationship Distress with Spouse or Intimate Partner (p.716)
V61.8 (Z63.8) High Expressed Emotion Level Within Family (p.716)
995.53 (T74.22XA) Child Sexual Abuse, Confirmed, Initial encounter (p.718)
V15.41 (Z62.810) Personal History (Past History) of sexual abuse in childhood (p.718)
995.51 (T76.32XA) Child Psychological Abuse, Suspected, Initial encounter (p.719)
V15.41 (Z91.410) Personal History (Past History) of Spouse or Partner Violence, Physical (p.720)
995.83 (T74.21XA) Spouse or Partner Violence, Sexual, Confirmed, Initial encounter (p.720)
995.82 (T76.31XA) Spouse or Partner Abuse, Psychological, Suspected, Initial encounter (p.721)
995.83 (T74.21XA) Adult Sexual Abuse by Non-Spouse or Non-Partner, Confirmed, Initial encounter (p.722)
V62.29 (Z56.9) Other Problem Related to Employment (p.723)
V60.2 (Z59.6) Low Income (p.724)
V62.89 (Z65.4) Victim of Crime (p.725)
V15.49 (Z91.49) Other Personal History of Psychological Trauma (p.726)
V69.9 (Z72.9) Problem Related to Lifestyle (p.726)
V15.29 Personal History of surgery to other organs (Vaginal Hysterectomy)
PTSD CRITERIA

Traumatic experience(s)
• Intrusion
• Avoidance
• Alterations in cognition & mood
• Alterations in arousal
• Functional interference
CHECKLIST FOR PTSD

Re-experience the event over and over again
• You can’t put it out of your mind no matter how hard you try
• You have repeated nightmares about the event
• You have vivid memories, almost like it was happening all over again
• You have a strong reaction when you encounter reminders, such as a car backfiring

Avoid people, places, or feelings that remind you of the event
• You work hard at putting it out of your mind
• You feel numb and detached so you don’t have to feel anything
• You avoid people or places that remind you of the event

Feel “keyed up” or on-edge all the time
• You may startle easily
• You may be irritable or angry all the time for no apparent reason
• You are always looking around, hyper-vigilant of your surroundings
• You may have trouble relaxing or getting to sleep
Many DSM-5 PTSD Symptoms Reflect Losses of Higher Cortical Functioning

**B) Cluster: Intrusion Symptoms**
- Involuntary distressing memories
- Dissociative reactions (flashbacks)

**C) Cluster: Trauma-Related Avoidance**
- Avoiding external reminders

**D) Cluster: Alterations in cognitions and mood**
- Dissociative amnesia
- Persistent negative emotional states
- Inability to feel positive emotions

**E) Cluster: Alterations in arousal and reactivity**
- Angry outbursts
- Reckless behavior
- Exaggerated startle responses
- Difficulty relaxing or falling asleep

Loss of Authority Over MEMORY
Loss of Authority Over COGNITIONS
Loss of Authority Over EMOTIONS
Loss of Authority Over BEHAVIOR
CO-OCCURRING MEDICAL CONDITION (TBI), MENTAL HEALTH & SUBSTANCE USE DISORDER
A concussion is caused by a jolt that shakes one’s brain back and forth inside your skull. Any hard hit to the head or body -- whether it’s from a football tackle or a car accident -- can lead to a concussion. Although a concussion is considered a mild brain injury, it can leave lasting damage if one doesn't rest long enough to let the brain fully heal afterward.
Overlap of PTSD and TBI Symptoms

- Concentration, attention, sleep etc.
- Examine onset: target trauma & TBI may not be the same event
- Look at developmental history prior to traumatic episode to see if there is a change in function
- Identify level of severity of symptoms
- If comorbid with PTSD, treat the PTSD and see what symptoms remain
CAUSES OF COGNITIVE DEFICITS RELATED TO TBI

- Brain injury
- Tinnitus-related psychological distress
- Insomnia
- Chronic headaches
- Depression
- PTSD
- Chronic Pain

Impact why problems with thinking, concentration and being able to think clearly
MANY FACTOR MIMIC, MASK OR EXACERBATE TBI OR POST CONCUSSIVE SYMPTOMS (PCS)

- Brain injury
- Vestibular injury
- Tinnitus-Related Psychological Distress
- Chronic Bodily Pain or Headaches
- Insomnia /Sleep Disturbance
- PTSD
- Anxiety/Stress/Somatic Preoccupation
- Life Stress

All cause symptoms similar to Post Concussive Symptoms
TYPICAL RECOVERY TIMES FROM TBI

Athletes: 1-28 days
Civilians: 1 week to 6 months
Service members coming out of combat: can be longer
RISK FACTORS FOR LONG-TERM SYMPTOMS AND PROBLEMS

**Biological**
- Genetics
- Injury severity
- Prior brain injury

**Psychological**
- Past mental health problems
- Resiliency
- Current traumatic stress and/or depression

**Social/Environmental**
- Life stress and problems with employment
- Litigation/Disability/Compensation issues
POST CONCUSSIVE SYMPTOMS

• Headaches
• Fatigue
• Noise Sensitivity
• Problems Concentrating
• Problems with Memory
• Sleep Disturbances
• Depression—has similar symptoms to PCS
• Substance Use Disorders
TREATMENT RECOMMENDATIONS FOR REHABILITATION OF PATIENTS WITH TBI & SUBSTANCE USE DISORDERS

Focused, Evidence-Supported Treatment for Specific Symptoms & Problems

- Substance Use Disorder Intervention & Treatment
- Medications
- Physical Therapy
- Vestibular Rehabilitation
- Exercise
- Psychological treatment - CBT especially if chronic depressed
- Self-management
- Behavioral Activation
- Stress Management
- Acceptance & Commitment Therapy
EXERCISE FOR INDIVIDUALS WHO HAVE LONG TERM TBI & SUDS SYMPTOMS

Exercise as a component of a treatment Plan for patients with SUDS comorbid with TBI
• Facilitates molecular markers of neuroplasticity & promotes neurogenesis healthy & injured brains
• Associated with changes in neurotransmitter systems associated with depression & anxiety
• Effective treatment or adjunctive treatment for mild forms of anxiety & depression
• Associated with reduced pain and disability in patients with chronic low back pain
• Regular long-term aerobic exercise reduces migraine frequency, severity & duration
GOAL FOR PATIENTS WITH COMPLEX COMORBIDITIES WITH MTBI TO IMPROVE FUNCTIONING

• Gain abstinence from substance use disorder(s)
• Reduce Sleep Disturbance
• Lessen Stress & Anxiety Symptoms
• Lessen Depressive Symptoms
• Deconditioning from pattern of responses to Triggers
• Reduction of Headaches
• Reduction of Bodily Pain

Treat what you can treat!
Coping: “the person’s constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person’s resources.” (Lazarus & Folkman, 1984)

Coping (whether adaptive or maladaptive) depends on intact higher cortical functioning

- Cognitive appraisal (thinking)
- Enacting a coping strategy (doing)

The performance limits of the brain, therefore, define the limits of adaptive coping
LETS LOOK AT REASON FOR COMORBIDITIES WITH TBI

The structure and functioning of the CNS set limits on capacities for coping and all other behavior.

TBI

- Mental disorders are the result of losses of integrity in the CNS rather than maladaptive coping choices
- Substance Use Disorders

PTSD

- Major depressive disorder
- Generalized anxiety disorder
- Psychotic disorders
- Substance Use Disorders

To think and teach otherwise is to blame our patients for their own suffering.
REGIONS OF CORTEX INVOLVED IN SELF REGULATION

**Medial PFC**
- Volitional control of emotion

**Orbitofrontal PFC**
- Decision making

**Dorsolateral PFC**
- Volitional control of attention

**Insula** (not visible)
- Volitional control of arousal

Together, these regions of prefrontal and insular cortex make possible inhibition and control of emotions, thoughts, behaviors, and physiological arousal.
**Hippocampus:**

Gray-Matter Partner to Prefrontal Cortex (PFC)

**FUNCTIONS**

- **Declarative memory:** laying down and consolidation of recallable memory
- **Inhibition** (along with PFC)
- **Fear extinction**
- **Spatial mapping** (GPS)
- May also be crucial for constructing a coherent mental image, whether from current perception or memory
Amygdala:
Important Target for Control by PFC and Hippocampus

FUNCTIONS
• Puts “emotional stamp” on memories
• Fear, anger, (etc.?)
• Threat detector
• Social recognition
• Fear conditioning
• Appetite conditioning?
Nucleus Accumbens: Another Important Target for Control By PFC and Hippocampus

FUNCTIONS
• Reward, pleasure
• Well-being
• Motivation
• Focus, attention
• Goal-directed behavior
• Addiction, craving
<table>
<thead>
<tr>
<th>Brain systems</th>
<th>Low–Moderate Stress</th>
<th>Extreme Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFC &amp; Hippocampus</td>
<td>• ↑ in density of dendrites and synapses</td>
<td>• ↓ in density of dendrites and synapses</td>
</tr>
<tr>
<td></td>
<td>• ↑ in numbers of neurons</td>
<td>• ↓ in numbers of neurons</td>
</tr>
<tr>
<td>Amygdala</td>
<td>• ↓ in density of dendrites and synapses</td>
<td>• ↑ in density of dendrites and synapses</td>
</tr>
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<td></td>
<td>• ↓ in numbers of neurons</td>
<td>• ↑ in numbers of neurons</td>
</tr>
<tr>
<td>Nucleus accumbens</td>
<td>• ↑ in dopamine release</td>
<td>• ↓ in dopamine release</td>
</tr>
<tr>
<td></td>
<td>• ↑ in well-being</td>
<td>• ↓ in well-being</td>
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<tr>
<td></td>
<td>• ↑ in motivation, problem-solving (active coping)</td>
<td>• ↓ in motivation, problem-solving (avoidant coping)</td>
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</table>
LET’S LOOK AT OUR THIRD CASE

CASE 3: Robbie
Tentative Diagnosis

Principal Diagnosis
907.0 (S06.2X9S) Diffuse traumatic brain injury with loss of consciousness of unspecified duration, sequela (p.624)
294.11 (F02.81) Major neurocognitive disorder due to traumatic brain injury, with behavioral disturbance (p.624)
305.00 (F10.10) Alcohol use disorder, mild (p.490)
309.4 (F43.20) Adjustment disorder, with mixed disturbance of emotions and conduct (p.286)

Provisional Diagnosis
907.0 (S06.2X9S) Diffuse traumatic brain injury with loss of consciousness of unspecified duration, sequela (p.624)
293.83 (F06.31) Depressive disorder due to another medical condition, with depressive features (p.180)
Other Conditions That May Be a Focus of Clinical Attention

V61.20 (Z62.820) Parent-Child Relational Problem (p.715)
V61.8 (Z63.8) High Expressed Emotion Level Within Family (p.716)
995.52 (T76.02XA) Child neglect, suspected, Initial encounter (p.717)
V62.3 (Z55.9) Academic or Educational Problem (p.723)
V62.89 (Z60.0) Phase of Life Problem (p.724)
V62.4 (Z60.4) Social Exclusion or Rejection (p.724)
V15.81 (Z91.19) Nonadherence to Medical Treatment (p.726)
mTBI

- Speech and language deficits
- Extreme mood lability / disinhibition
- Impulsivity
- Poor balance
- Dizziness
- Changes in perception and increased sensitivity (vision, hearing, touch)

PTSD

- Intrusive memories
- Nightmares
- Reliving the trauma
- Psychological/physiological distress with exposure to cues
- Avoidance of trauma-related thoughts, feelings, reminders, conversations
- Hypervigilance
- Exaggerated startle

- Impaired concentration and decision making
- Learning difficulties
- Memory impairment and confusion
- Inability to recall trauma
- Slower processing speed
- Being “overwhelmed”
- Impulsivity
- Reduced insight
- Rigid thinking
- Amotivation
- Interpersonal conflict
- Social withdrawal / isolation / agoraphobia
- Reduced intimacy / feeling less compassionate or warm towards others
- Impaired work and school performance

- Depressed mood
- Irritability / aggression
- Sleep disturbance
- Anxiety symptoms
- Substance misuse/abuse/dependence
- Guilt
- Lowered frustration tolerance
- Being socially “inappropriate”
- Fatigue
- Insomnia
- Headaches**
- Cardiovascular, gastrointestinal, musculoskeletal disorders
- Sexual problems
- Noise sensitivity
LET’S LOOK AT OTHER SUDS COMORBID CONDITIONS

Depression
Sleep/Wake Disorders
Pain
### Symptoms of Depression

#### Cognitive Problems
- Memory
- Concentration, attention and focusing
- Learning and understanding new things
- Processing & understanding information including following complicated directions
- Language problems
- Problem-solving, organization, decision-making
- Impulse control
- Slowed or cloudy thinking
- Negative beliefs about self, world & future

#### Affective/Behavioral Problems
- Frustration or irritability
- Depression/sad
- Anxiety
- Reduced tolerance for stress
- Sleep problems
- Numbing out or flipping out
- Inflexibility
- Feeling less compassionate or warm towards others
- Feeling guilty
- Feeling helpless/hopeless
- Denial of problems
- Social appropriateness

#### Somatic Complaints
- Headache
- Fatigue
- Poor balance
- Dizziness
- Changes in vision, hearing, or touch
- Sexual problems
SLEEP DISORDERS ARE COMMON COMORBID WITH SUDS

• Persons with physical, cognitive or behavioral/emotional symptoms following concussion should be screened

• Insomnia is the most common sleep disturbance following concussion and/or traumatic experience

• Primary care diagnosis and management is facilitated by a focused sleep assessment

• Non-pharmacological measures are the foundation for care, to include stimulus control and sleep hygiene

Referral to a sleep medicine specialist may be necessary or likely

• Especially for chronic insomnia (after initial management)

• Sleep disturbances can significantly exacerbate or impact other concussion and/or traumatic symptoms
# Sleep Disorders Assessment

<table>
<thead>
<tr>
<th>Area of Assessment</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Symptoms</td>
<td>Difficulty initiating and/or maintaining sleep, non-restorative sleep, nightmares, snoring, awakening with gasping and choking, fatigue, tiredness or drowsiness during the daytime</td>
</tr>
<tr>
<td>Consequences</td>
<td>Cognitive impairment, mood disturbances, irritability, decrease in functional ability, role interference (family, social, academic, occupational)</td>
</tr>
<tr>
<td>Predisposing factors</td>
<td>Pre-concussion sleep pattern, prior history of a sleep disturbance, excessive weight, increasing neck circumference, narrow upper airway, older age, genetic factors, mood disturbances, anxiety or preoccupation concerning sleep quality, medications, other co-morbid behavioral health or medical conditions</td>
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<tr>
<td>Precipitating factors</td>
<td>Concussion, deployment, acute stress</td>
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<tr>
<td>Perpetuating behavioral factors</td>
<td>Napping, excessive caffeine/stimulant use, irregular sleep schedule</td>
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<td>Watching TV, reading, working on a computer, or playing video games while in bed</td>
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<tr>
<td>Perpetuating environmental factors</td>
<td>Light, noise, travel and time zone changes</td>
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<tr>
<td>Perpetuating psychosocial factors</td>
<td>Familial stress, inadequate social support system, financial stress, safety concerns or other worries</td>
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<tr>
<td>Perpetuating occupational factors</td>
<td>Shift work, standing watch, duty schedule incompatible with preferred sleep schedule, work stressors</td>
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<tr>
<td>Perpetuating physical factors</td>
<td>Pain, discomfort, tinnitus</td>
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<tr>
<td>Perpetuating lifestyle factors</td>
<td>Alcohol use, diet, smoking, limited physical activity, family and community obligations</td>
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<tr>
<td><strong>Stimulus Control</strong></td>
<td><strong>Sleep Hygiene</strong></td>
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<tr>
<td>Remove TV, radio, smartphone, electronic tablet, computer and other electronic</td>
<td>Avoid caffeine/stimulant intake within six hours of bedtime</td>
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<tr>
<td>devices from bedroom</td>
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<tr>
<td>Relax before bedtime; avoid going to bed worried or angry; use the bedroom only for</td>
<td>Engage in exercise daily during the morning or afternoon; avoid exercise close to bedtime</td>
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<tr>
<td>sleep and intimacy</td>
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<tr>
<td>Go to bed only when tired and sleepy</td>
<td>Avoid alcohol and nicotine use, large/heavy meals and excessive fluid close to bedtime</td>
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<tr>
<td>If unable to fall asleep within 15-20 minutes, get up, go to another room with the</td>
<td>Promote a sleep friendly environment, minimize noise and light, maintain a cool but comfortable temperature</td>
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<td>lights dim and do something relaxing while avoiding electronic use (TV, computers,</td>
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<td>phone); return to bed when sleepy</td>
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<tr>
<td>-Repeat above, as needed throughout the night, even after awakenings</td>
<td>Get up at the same time every morning (regardless of the amount of sleep obtained), even on the weekends;</td>
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<td></td>
<td>avoid daytime naps</td>
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<td>Get exposure to natural light every morning</td>
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Chronic Pain is a common issue of OEF and OIF Returning Veterans which can hide or exacerbate Substance Use Disorders comorbid with TBI or PTSD Symptoms and Needs to be Treated
EXPERT CONSENSUS GUIDELINES FOR DEALING WITH PAIN

1. **Assessment:** What are the best approaches to assess PTSD, history of mTBI and pain in patients presenting for treatment? Use diagnostic tools to screen for all three. Determine comorbidities and if the symptoms are current or historical. Rule out possibility of depression and substance use disorder.

2. **Treatment Planning:** What are the challenges of treatment planning with a patient comorbid PTSD, substance use disorder, pain & history of mTBI? Make sure patient has an understanding of what treatments will be used for which symptoms.

3. **Treatment:** What do practice guidelines tell us about the most effective PTSD, substance use disorder, pain & a history of mTBI treatment strategies? Use guideline for all 3 specific conditions. Deliver a consistent message which is encouraging for recovery.
• Substance Use Disorder: Structured Program with Cognitive Behavioral Therapy (CBT), Motivational Enhancement Therapy (MET) and the Alcoholics Anonymous (AA) based Twelve Step Facilitation (TSF) along with long-term 12 Step Program participation
• Depression, Bipolar Disorder, Anxiety: CBT, Medication Management, Relaxation and Stress Reduction programming
• PTSD: Prolonged Exposure or Cognitive Processing Therapy
• TBI: Rehabilitation interventions
• Pain: Rehabilitation interventions- Use psychoeducation to help them to recognize that pain has a role as trigger for PTSD & increased anxiety and the utilize CBT for Chronic Pain
ASSESSMENTS OF SUDS COMORBIDITIES

Substance Use Disorder
- AUDIT
- Addiction Severity Index (ASI-F)
- Drug Abuse Screening Test (DAST)

PTSD
- PCL (PTSD Checklist)
- CAPS

TBI
- DVBIC 3 Question TBI Screening Tool
- Military Acute Concussion Evaluation (MACE)

Overall Symptom Assessment
- Neurobehavioral Symptom Inventory (NSI)

Bipolar Disorder
- Mood Disorder Questionnaire (MDQ)
- MoodCheck Bipolar Screening

Sleep Disorder
- Berlin Questionnaire
- Insomnia Severity Index
- Morningness-Eveningness Questionnaire
- STOP-BANG Questionnaire
- Epworth Sleepiness Scale

PAIN
- Initial Pain Assessment
- Initial Pain Assessment Tool
- Patient Comfort Assessment Guide
APPS FOR SUDS RELATED COMORBIDITIES

**Substance Use Disorder**
- Quitter

**Depression & Anxiety**
- T2Mood Tracker
- Tactical Breather
- Breathe2Relax
- LifeArmor
- Goal Setting

**Sleep**
- CBT-I Coach
- White Noise

**PTSD**
- PE Coach
- PTSD Coach
- CPT Coach

**MTBI**
- mTBI Pocket Guide

**Suicide Prevention**
- Moving Forward
- Safe Helpline
- ASK
TREATMENT MANUALS FOR TBI RELATED COMORBIDITIES

PTSD:


Pain Related:
TREATMENT MANUALS FOR TBI RELATED COMORBIDITIES

Sleep Related:

Substance Use Disorders:
TOP 10 TIPS TO PROMOTE SUCCESSFUL COPING WITH COMORBIDITIES OF SUDS

1. Stay physically active: Exercise daily. Avoid impairment and disability due to becoming physically inactive (“If you don’t use it, you will lose it”)

2. Stay mentally active: Learn something new every day. Exercise your brain with daily “brain jogging,” such as reading books, newspapers, and magazines. Again: “Use it or lose it.”

3. Stay connected to other people: Treasure and nurture the relationships you have with your spouse/partner, your family, friends, and neighbors. Reach out to others—including younger people. Stay involved in your community.


5. Set yourself goals and take control: It is important to have meaningful goals in life and to take control in achieving them. Being in control of things gives us a sense of mastery and usually leads to positive accomplishments.

6. Create positive feelings for yourself: Experiencing positive feelings is good for our body, our mental health, and for how we relate to the world around us. Feeling good about our own age is part of this.

7. Minimize life stress: Many illnesses are related to life stress, especially chronic life stress. Stress has a tendency to “get under our skin,” if we notice it or not. Try to minimize stress and learn to unwind and “smell the roses.”


9. Have regular medical check-ups: Take advantage of health screenings and engage in preventive health behavior. Many symptoms and illnesses can be successfully managed if you take charge and if you partner with your health care providers.

10. It is never too late to start working on Tips 1 through 9: It is never too late to make changes.
GOAL FOR PATIENTS WITH COMPLEX COMORBIDITIES TO IMPROVE FUNCTIONING

• Gain Abstinence from Substance(s) being abused
• Lessen Stress & Anxiety Symptoms
• Lessen Depressive Symptoms
• Deconditioning from pattern of responses to Triggers
• Reduce Sleep Disturbance
• Reduction of Headaches
• Reduction of Bodily Pain

Treat what you can treat!