DEFENSE CENTERS OF EXCELLENCE
For Psychological Health & Traumatic Brain Injury

Co-Occurring Conditions Toolkit: Mild Traumatic Brain Injury and Psychological Health

Concussion, Post-traumatic Stress, Depression, Chronic Pain, Headache, Substance Use Disorder

POC: Name
Email
Phone

The Toolkit

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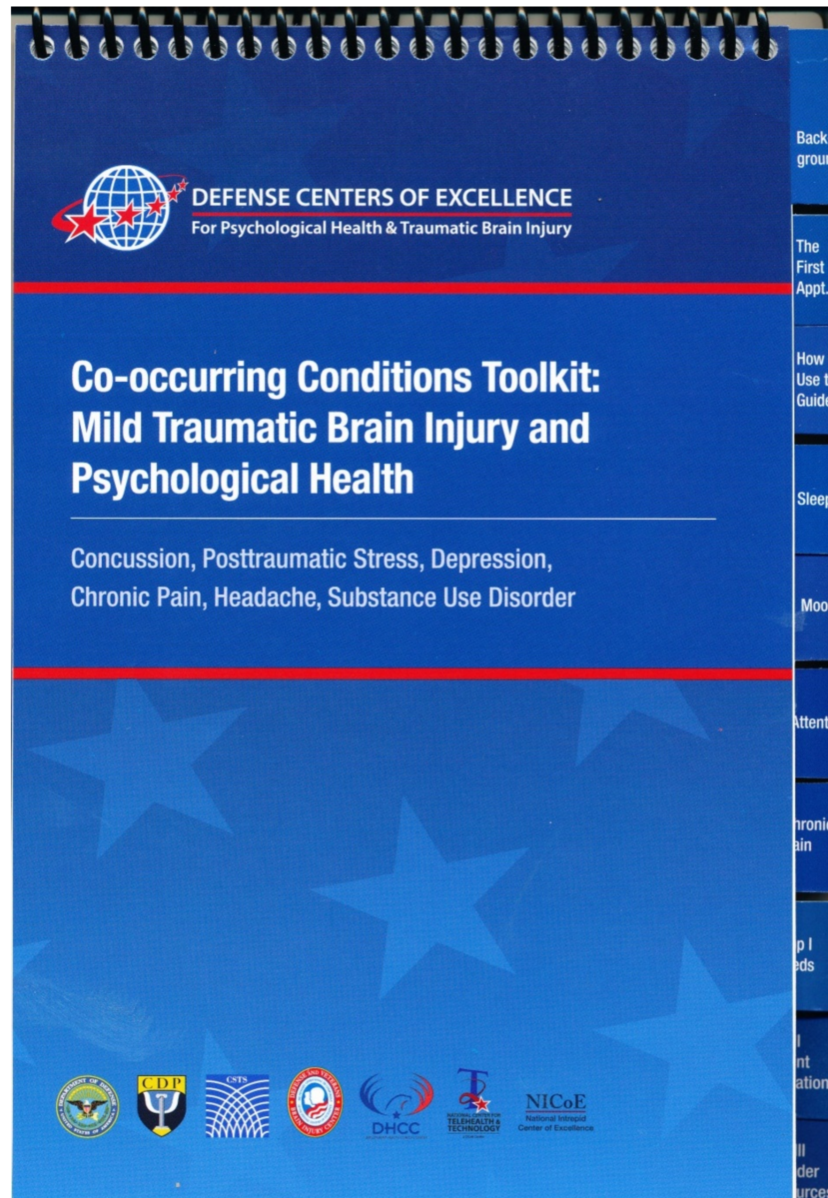

Resilience ★ Recovery ★ Reintegration

Sections

- Background
- The First Appointment
- How to Use this Guide
- Topics
- Appendix 1: Meds
- Appendix 2: Patient Education
- Appendix 3: Provider Resources

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Topics

- Sleep
- Mood
- Attention
- Chronic pain

- Concussion
- Headache
- PTSD
- Acute Stress Disorder
- Depression
- Chronic Pain
- Substance Use Disorder

First CONUS visit

- Sgt Case, 23-year old, was seen in-theater by CDR Hancock and referred back to CONUS after experiencing his third mTBI in four months. He presents to your TBI clinic a month after returning with c/o continuing problems falling asleep and headaches and overall lack of motivation. His wife also reports he is drinking more than he ever did in the past.
- He has no physical injuries or findings on exam.

Sleep disorder tab

Table 1: Sleep – Tool & Action Recommended

CO-OCCURING DISORDERS TO CONSIDER	Sleep Symptoms: Break-through pain	Fear of sleep due to nightmares	Difficulty falling asleep due to ruminations	Difficulty with sleep due to withdrawal symptoms	Early AM/night-time awakening (unexplained)	Tool	Action Recommended
Concussion					✓	• Consider PHQ-2 • Consider Pain Scale • Assess for quality of sleep and significant snoring	• If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • If patient admits pain, clarify characteristics of any pain • Consider sleep questionnaire such as the PSQI
Headache	✓					• Pain Scale • Assess for quality of sleep and significant snoring	• If patient admits pain, clarify characteristics of any pain • Consider sleep questionnaire such as the PSQI
Posttraumatic Stress Disorder		✓	✓		✓	• PC-PTSD • Consider AUDIT-C and investigation of substance use given frequent co-occurrence • Assess for quality of sleep and significant snoring	• If PC-PTSD is positive on >2 items, administer PCL-M to further assess for possible PTSD • If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use • Consider sleep questionnaire such as the PSQI
Acute Stress Disorder		✓	✓		✓	• PC-PTSD • Consider PHQ-2 • Assess for quality of sleep and significant snoring	• If PC-PTSD is positive on >2 items, administer Acute Stress Disorder (ASD) Scale to further assess for possible ASD • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI
Depression			✓		✓	• PHQ-2 • Assess for quality of sleep and significant snoring	• If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI
Chronic Pain	✓			✓		• Pain Scale • Consider PHQ-2 • Consider AUDIT-C and investigation of substance use given frequent co-occurrence • Assess for quality of sleep and significant snoring	• If patient admits pain, clarify characteristics of any pain • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use • Consider sleep questionnaire such as the PSQI
Substance Use Disorder				✓		• AUDIT-C and investigation of other substances • Consider PC-PTSD • Consider PHQ-2 • Consider Pain Scale	• If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use • If PC-PTSD is positive on >2 items, administer PCL-M to further assess for possible PTSD • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • If patient admits pain, clarify characteristics of any pain

MODIFYING FACTORS: Consider investigating for possible stressful family relations, work and career concerns, financial concerns, excessive use of stimulants.

SAFETY FACTORS: Assess for suicidal/homocidal thoughts and potential abuse of medications; Evaluate for risk during operation of heavy machinery and driving.

✓ – Frequently associated with diagnosis

BLANK – Less likely to be associated with diagnosis

Green text implies expert opinion as no guidance is given in CPGs

PC-PTSD – Primary Care PTSD Screen

AUDIT C – Alcohol Use Disorders Identification Test

PHQ-2 – Patient Health Questionnaire (Depression) *the "2" is simply a more condensed depression screening than the "9"

PHQ-9 – Patient Health Questionnaire (Depression) *the "9" indicates that the tool is screening for depression specifically by looking at 9 DSM IV criteria – more comprehensive that then PHQ-2

DAST-20 – Drug Abuse Screening Test

PCL-M – PTSD Checklist – Military *the "M" signifies the military version of the screen

PSQI – Pittsburgh Sleep Quality Index

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Second visit

- Sgt Case returns stating that his sleep and headaches have improved some on the Elavil you prescribed; however, his wife is complaining that he seems depressed and is drinking more than he should be. Recently he has tried some of the pills his wife was given for her depression…. (bottle says Prozac)

Mood disorder tab

Table 1: Mood – Tool & Action Recommended

CO-OCCURING DISORDERS TO CONSIDER	Mood Symptoms (depressed mood is commonly seen in conjunction with all below)									Tool	Action Recommended
	Emotional numbing	Irritability	Emotional fatigue	Physical fatigue	Lack of enjoyment in most daily activities	Distress with traumatic reminders	Impulsivity	Activities driven by medication needs	Hyperarousal		
Concussion		✓		✓			✓			• PHQ-2 • Assess for quality of sleep and significant snoring • Consider Pain Scale	• If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI • If patient admits pain, clarify characteristics of any pain
Headache			✓					✓		• Pain Scale • PHQ-2 • Consider assessment for quality of sleep and significant snoring	• If patient admits pain, clarify characteristics of any pain • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI
Posttraumatic Stress Disorder	✓	✓	✓	✓	✓	✓			✓	• PC-PTSD • PHQ-2 • Consider assessment for quality of sleep and significant snoring • Consider AUDIT-C and investigation of substance use given frequent co-occurrence	• If PC-PTSD is positive on >2 items, administer PCL-M to further assess for possible PTSD • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI • If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use
Acute Stress Disorder	✓	✓	✓			✓			✓	• PC-PTSD • PHQ-2 • Consider assessment for quality of sleep and significant snoring	• If PC-PTSD is positive on >2 items, administer Acute Stress Disorder Scale to further assess for possible ASD • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI
Depression		✓	✓	✓	✓					• PHQ-2 • Consider assessment for quality of sleep and significant snoring	• If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI
Chronic Pain					✓		✓	✓		• Pain Scale • PHQ-2 • Consider assessment for quality of sleep and significant snoring • Consider AUDIT-C and investigation of substance use given frequent co-occurrence	• If patient admits pain, clarify characteristics of any pain • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • Consider sleep questionnaire such as the PSQI • If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use
Substance Use Disorder		✓					✓	✓		• AUDIT-C and investigation of other substances • PHQ-2 • PC-PTSD • Consider assessment for quality of sleep and significant snoring • Consider Pain Scale	• If AUDIT-C ≥3 (F), ≥4 (M), then consider referral to Behavioral Health vs. education depending on symptom severity • Consider DAST-20 if suspicion of other substance use • If either question in PHQ-2 scores >2, administer PHQ-9 to further assess for possible depression • If PC-PTSD is positive on >2 items, administer PCL-M to further assess for possible PTSD • Consider sleep questionnaire such as the PSQI • If patient admits pain, clarify characteristics of any pain

MODIFYING FACTORS: Consider investigating for possible stressful family relations, work and career concerns, financial concerns, excessive use of stimulants.

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Med table

Selective Serotonin Reuptake Inhibitors (SSRIs) (cont.)

Generic (Brand Name)	Adult Starting Dose (Max Per Day)	Advantages	Disadvantages	Pregnancy Category	Safety Margin for SSRIs	Efficacy for SSRIs
Fluoxetine (Prozac)	• Initial adult dose = 20mg QD • Max adult dose/day = 80mg QD • Initial geriatric dose = 10mg QD • Use lower doses in the elderly	• Long half-life good for poor adherence, missed doses • May be taken with or without food • AM daily dosing • Lowest rate of discontinuation syndrome among the SSRIs • Generic	• Slower to reach steady state • May be stimulating and may have more CYP450 interactions • Associated with pharyngitis, rash and allergic events	C	• Do not initiate concomitant therapy with a benzodiazepine • Drug interactions may include Tricyclic Antidepressants, NSAIDs, SNRIs, Triptans, aspirin, carbamazepine, warfarin, nilotinib, sibutramine, tamoxifen, tetrabenazine and ziprasidone • Avoid concomitant use with alcohol, l-tryptophan and st. john's wort • Taper dose slowly to prevent clinically significant discontinuation symptoms	• Escitalopram and fluoxetine have good documentation for off-label use in PTSD
Fluoxetine (Prozac) Weekly	• 90mg Q week	• Once weekly dosing for maintenance therapy for patients who have responded to daily administration	• If a satisfactory response is not maintained with once weekly dosing, consider reestablishing a daily dosing regimen • Possibly more CYP450 interactions	C		
Paroxetine (Paxil)	• Initial adult dose = 20mg QD • Max adult dose/day = 50mg QD • Initial geriatric dose = 10mg QD • Max geriatric dose = 40mg QD	• May be taken with or without food. • AM daily dosing • Generic	• Of the SSRIs, highest reported rate of discontinuation syndrome, highest rate of sexual dysfunction and weight gain • Sometimes sedating and more anti-cholinergic symptoms • Possibly more CYP450 interactions	D		

Selective Serotonin Reuptake Inhibitors (SSRIs) (cont.)

SSRIs Adverse Drug Effects: Relative Comparisons

Medication Name	Anticholinergic Activity (muscarinic)	Sedation	Orthostatic Hypotension	Cardiac Effects	GI Effects	Seizures	Weight Gain	Sexual Dysfunction	Mood Changes During Titration or Abrupt Discontinuation
Citalopram	0	0/+	0	0	+++	0	0	+++	+++
Escitalopram	0	0/+	0	0	+++	0	0	+++	+++
Fluoxetine	0	0/+	0	0/+	+++	0/+	0/+	+++	++
Paroxetine	0/+	0/+	0	0	+++	0	0/+	+++	+++
Sertraline	0	0/+	0	0	+++	0	0	+++	++

The side effect description is: 0 = minimal to none; + = low; ++ = moderate; +++ = high

SSRIs	mTBI	Headache	Acute Stress	PTSD	Depression	Chronic Pain	Substance Use Disorder
Pros	May be useful for some of the behavioral symptoms	Not in CPG but maybe useful as a prophylaxis	Not in CPG but can be used	Very effective first-line treatment	Very effective first-line treatment	No additional	Help with sobriety in instances where comorbid depressive symptoms are effectively targeted
Cons	During titration phase of treatment, may increase anxiety and fatigue	No additional	During titration phase of treatment, may increase anxiety, nightmares and fatigue	During titration phase of treatment, may increase anxiety, nightmares and fatigue	During titration phase of treatment, may increase anxiety, nightmares and fatigue	When used in conjunction with Opioids, sexual side effects may be even more pronounced	No additional

Educational materials

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Appendix II: Patient Education Web Sites

General

http://afterdeployment.org

http://www.dcoe.health.mil/ForWarriors.aspx

http://www.centerforthestudyoftraumaticstress.org/

Depression

http://www.nimh.nih.gov/health/publications/depression/complete-index.shtml

http://www.suicidepreventionlifeline.org/Veterans

Concussion

http://www.dvbic.org

http://www.traumaticbraininjuryatoz.org

PTSD and ASD

http://www.ptsd.va.gov/

Substance Use Disorder

http://www.drugabuse.gov/

Provider resources

Appendix III: Provider Resources

Provider Resources Websites

http://www.dcoe.health.mil/
General information regarding TBI/concussion and psychological health conditions commonly affecting the nation's military communities, servicemembers and families.

http://afterdeployment.org
General information regarding concussion and psychological health conditions commonly seen post-deployment.

http://www.pdhealth.mil/respect-mil/index1.asp
Information regarding depression and PTSD in the primary care setting.

http://dvbic.org
Information regarding TBI.

http://www.suicidepreventionlifeline.org/Veterans
Information for providers regarding suicide prevention. This includes patient handouts.

http://www.centerforthestudyoftraumaticstress.org/
Information for providers regarding traumatic exposures. This includes patient handouts.

http://www.cdc.gov/ncipc/pub-res/tbi_toolkit/physicians/mtbi/mtbi.pdf
Center for Disease Control and Prevention provider toolkit for concussion.

http://www.drugabuse.gov/
Provider resources regarding drugs of abuse from the National Institute of Drug Abuse.

Additional Provider Tools

PHQ-2 (pg. 108), PHQ-9 (pg. 109)
For Major Depressive Disorder (MDD).

AUDIT-C (brief Alcohol Screening Questionnaire for Unhealthy Alcohol Use) (pg. 111)
For SUD.

PTSD Checklist-Military (PCL-M) (pg. 113)
For PTSD.

Pain Assessment Tool (pg. 114)
For COT.

www.ensuringsolutions.org/usr_doc/DAST.pdf
For DAST-20.

http://www.sleep.pitt.edu/content.asp?id=1484&subid=2316
For PSQI.

http://www.psych.on.ca/files/nonmembers/AcuteStressDisorderScale_DRN_March_5_2010.pdf
For ASD Scales.

Tool for PTSD

PTSD Checklist – Military Version (PCL-M)

Patient Name ______________________

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem in the last month.

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, *disturbing memories, thoughts,* or *images* of a stressful military experience?					
2.	Repeated, disturbing *dreams* of a stressful military experience?					
3.	Suddenly *acting* or *feeling* as if a stressful military experience *were happening again* (as if you were reliving it)?					
4.	Feeling *very upset* when *something reminded* you of a stressful military experience?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful military experience?					
6.	Avoid *thinking about* or *talking about* a stressful military experience or avoid *having feelings* related to it?					
7.	Avoid *activities* or *situations* because *they remind you* of a stressful military experience?					
8.	Trouble *remembering important parts* of a stressful military experience?					
9.	Loss of *interest in things that you used to enjoy?*					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cut short?*					
13.	Trouble *falling* or *staying asleep?*					
14.	Feeling *irritable* or having *angry outbursts?*					
15.	Having *difficulty concentrating?*					
16.	Being "*super alert*" or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. PCL-M for DSM-IV. Boston: National Center for PTSD – Behavioral Science Division, 1991. This is a Government document in the public domain.

Questions?