Guidelines for Concussion / Mild Traumatic Brain Injury & Persistent Symptoms

Second Edition

For adults (18+ years of age)







Module 8: Persistent Mental Health Disorders

Ontario Neurotrauma Foundation
Fondation ontarienne de neurotraumatologie

MODULE 8: PERSISTENT MENTAL HEALTH DISORDERS

The project team would like to acknowledge the Ontario Neurotrauma Foundation (ONF), who initiated and funded the development of the original guideline, as well as the current update. ONF is an applied health research organization with a focus on improving the quality of lives for people with an acquired brain injury or spinal cord injury, and on preventing neurotrauma injuries from occurring in the first place. ONF uses strategic research funding activity embedded within a knowledge mobilization and implementation framework to build capacity within systems of care. ONF works with numerous stakeholders and partners to achieve its objective of fostering, gathering and using research knowledge to improve care and quality of life for people who have sustained neurotrauma injuries, and to influence policy towards improved systems. The foundation receives its funding from the Ontario Government through the Ministry of Health and Long-Term Care.

Please note, the project team independently managed the development and production of the guideline and, thus, editorial independence is retained.

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The recommendations and resources found within the *Guidelines for Concussion/Mild Traumatic Brain Injury & Persistent Symptoms* are intended to inform and instruct care providers and other stakeholders who deliver services to adults who have sustained or are suspected of having sustained a concussion/mTBI. These guidelines are not intended for use with patients or clients under the age of 18 years. These guidelines are not intended for use by people who have sustained or are suspected of having sustained a concussion/mTBI for any self-diagnosis or treatment. Patients may wish to bring their healthcare and other providers' attention to these guidelines.

The recommendations provided in these guidelines are informed by best available evidence at the time of publication, and relevant evidence published after these guidelines could influence the recommendations made within. Clinicians should also consider their own clinical judgement, patient preferences and contextual factors such as resource availability in clinical decision-making processes.

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Table of Contents

Unique Features & Symbols in the Current Guideline

Hyperlinks

To improve ease of use, the current guideline has embedded hyperlinks to improve navigation between sections, appendices, and so on. For example, by clicking any heading in the table of contents above, you will be taken directly to that particular section in the current PDF document. Also, anytime there is mention of a particular table, figure, appendix or section, you can simply click on it to go directly to that item.

Symbols

The following symbol has been placed to the left of each guideline recommendation that should be prioritized for implementation. This was determined by expert consensus members during the endorsement/prioritization process, where experts were allowed to provide 20 prioritization votes (see Methodology in the Complete Version). Guideline recommendations with a summed prioritization score greater than 20 are key clinical practice guidelines recommendations for implementation.

The following symbol has been placed to the left of one key guideline recommendation in each of the sections that did not include a recommendation with a prioritization score greater than 20 (determined by expert consensus members during the endorsement/prioritization process).

At the bottom of each page in the current document, there is a hyperlinked footer that can be used to return to the table of contents as desired. Also, clicking “Return to Last Page” will take you back to the previously viewed page. (Note: When scrolling through the pages, the “Return to Last Page” button will only return to the last page that was scrolled through).

8 Persistent Mental Health Disorders

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Assessment

Early post-concussive symptoms following mTBI can include irritability, anxiety, emotional lability, depressed mood, and apathy. Thereafter a significant proportion of individuals may develop persistent mental health disorders, with major depression and anxiety disorders observed most frequently. Depressive disorders following TBI are commonly associated with increased irritability and often co-morbid with anxiety syndromes. The latter include generalized anxiety, panic attacks, phobic disorders, and post-traumatic stress disorder (PTSD). These disorders comprise both new conditions that develop de novo post-injury, as well as those reflecting an exacerbation of pre-injury conditions or vulnerabilities.[1]

Regardless of etiology these disorders require prompt recognition, given their frequency and potential to impede recovery in other symptom domains.[2] Pre-existing difficulties such as substance use disorders and poor psychosocial adjustment also place patients at risk for a slowed recovery.[3] Delays in returning to social and vocational roles can in turn produce demoralization and worsened emotional symptoms.[4]

The assessment of mental health disorders can be challenging, given the overlap in symptoms between mood and anxiety disorders, sleep disorders, pain syndromes, and other post-concussive cognitive difficulties. "Subthreshold" variants of certain conditions such as PTSD are also observed, in which a symptom cluster falls short of meeting formal diagnostic criteria yet contributes substantial morbidity. In general, it is recommended that DSM-V diagnostic criteria be applied in an "inclusive" manner: for example, counting all relevant symptoms toward a potential diagnosis of depression, regardless of whether the mTBI alone could have caused the symptom.[5,6] Potential contributing medical conditions should also be identified, such as anemia, thyroid dysfunction, B12 deficiency, and so forth. In situations of diagnostic uncertainty, a mental health referral should be sought.

Various self-report questionnaires can aid the clinician in assessing mental health disorders and offer the advantage of yielding criterion-based diagnoses as well as severity ratings to monitor progress: the Patient Health Questionnaire 9-item (PHQ-9; Appendix 8.1) for depression; the Generalized Anxiety Disorder 7-item scale (GAD-7; Appendix 8.2) and the short Primary Care PTSD Screen (PC-PTSD; Appendix 8.3) or the longer PTSD Checklist (PCL; Appendix 8.4); and the CAGE questionnaire for substance use (i.e., alcohol; Appendix 8.5). Note, however, that these questionnaires have not been validated specifically with the mTBI population.

RECOMMENDATIONS FOR ASSESSMENT OF PERSISTENT MENTAL HEALTH DISORDERS		
		GRADE
8.1	Given their prevalence and potential impact, all patients with persistent symptoms following concussion/mTBI should be screened for mental health symptoms and disorders, including: • Depressive disorders (Appendix 8.1) • Anxiety disorders (Appendix 8.2), including post-traumatic stress disorder (PTSD) (Appendix 8.3 and 8.4) • Irritability and other personality changes • Substance use disorders (Appendix 8.5) • Somatoform disorders	C
8.2	The use of self-report questionnaires can aid in the assessment and monitoring of common mental health disorders.	C

RECOMMENDATIONS FOR ASSESSMENT OF PERSISTENT MENTAL HEALTH DISORDERS (CONTINUED)		
		GRADE
8.3	Referral to a psychiatrist/mental health team should be obtained if: • The presentation is complex and/or severe • The risk of suicide is judged significant • Initial treatment is not effective within two months • Failure of or contraindication to usual medication strategies • Presence of prominent/major risk factors known to potentially affect the course of recovery (Table 1.1)	C

Management

Treatment is warranted whenever symptoms impact on functional status or impede recovery. Once identified, appropriate psychological and/or pharmacological treatment should be initiated. Consultation with a psychiatrist or a mental health team may be sought, yet the initial steps of treatment should not be delayed. General measures can be initiated and symptoms such as headaches, sleep disturbance, dizziness, and co-morbid pain addressed. General measures include the provision of support, validation, and reassurance, as well as education regarding mTBI and positive expectations for recovery. Involvement of the family can be very helpful at this stage. Education about sleep hygiene and regular light exercise should be provided. The latter can improve mood, perceived fatigue, and well-being, and counteract deconditioning. See Algorithm 8.1, which outlines care pathways for mild to moderate and severe mental health disorders following mTBI.

Medication may be required for those with moderate to severe, persistent depressive or anxiety symptoms. Of note, patients with marked irritability or emotional lability (i.e., even in the absence of a clear-cut depression) may also benefit from pharmacotherapy. Selective serotonin reuptake inhibitors (SSRIs) are recommended as first-line treatments after mTBI, based upon their favourable side-effect profile and broader utility when compared to agents from other classes. A small clinical literature[6-8] supports the utility of SSRIs in treating depression, reducing anxiety and irritability, and, in some reports, improving cognition, somatic symptoms, and psychosocial function. The efficacy and tolerability of both sertraline (starting at 25 mg; aiming for 50-200 mg/day) and citalopram (starting at 10 mg; aiming for 20-40 mg/day) is supported within the mTBI literature.[6] Common clinical experience suggests that other agents (e.g., alternate SSRIs, venlafaxine, mirtazepine) may also be useful after mTBI, yet clinical data with these agents is lacking. There are no studies of medication treatment for PTSD in the setting of TBI, yet the use of sertraline, paroxetine , and venlafaxine, a serotonin-norepinephrine

Table 8.1 General Considerations Regarding Pharmacotherapy after mTBI

- Prior to starting treatment, ensure that significant psychosocial difficulties are being addressed (e.g., ongoing domestic abuse, major family/caregiver conflict, other environmental issues).
- Before prescribing a new treatment, review current medications including over-the-counter medicines and supplements. If possible, minimize or stop agents that may potentially exacerbate or maintain symptoms.
- Drug therapy should target specific symptoms to be monitored during the course of treatment (e.g., dysphoria, anxiety, mood lability, irritability, as well as fatigue, sleep, headaches, and pain).
- In choosing amongst therapies, aim to minimize the impact of adverse effects upon arousal, cognition, sleep, and motor coordination, as well as seizure threshold–domains in which mTBI patients may already be compromised.
- A specific selective serotonin reuptake inhibitor (SSRI) is recommended as first-line treatment for mood and anxiety syndromes after mTBI. Other antidepressants may also be considered as described in the accompanying text. The use of benzodiazepines as first-line therapy for anxiety after mTBI is not encouraged.
- Start at the lowest effective dose and titrate slowly upwards, monitoring tolerability and clinical response, yet also aim for adequate dosing and trial duration. Inadequacies of either are frequent causes of treatment failure. At times the maximum tolerated doses may be required.
- Use of a single agent to alleviate several symptoms is ideal (e.g., tricyclic [TCA] for depression, sleep disruption, and headache relief). However, as individual post-concussive symptoms do not necessarily show a coupled response to treatment, a combination of strategies may be ultimately required (e.g., SSRI plus low-dose TCA for mood and headache treatment).
- Limited quantities of medications should be offered to those at an elevated risk for suicide.
- To prevent relapse, consider continuing successful pharmacotherapy for at least 6 months prior to a trial of slowly tapering medication.

Adapted from Silver JM, Arcinigas DB, Yudosky SC. Psychopharmacology. In: Silver JM, Arciniegas DB, Yudovsky SC, eds. *Textbook of Traumatic Brain Injury*. Arlington, VA: American Psychiatric Publishing Inc;2005:609-640.

reuptake inhibitor (SNRI), is supported by high-quality evidence in the non-TBI population.[9] In the absence of additional data specific to TBI, the use of treatment algorithms developed for primary mental health disorders may be appropriate, albeit with some qualifications. The mTBI population may be more sensitive to adverse medication effects upon cognition (alertness, attention, memory); balance and dizziness; sleep and fatigue; and headaches. Anticholinergic effects of certain tricyclic medications (e.g., amitriptyline, imipramine, doxepin) should be carefully monitored. Although uncommon, the risk of post-traumatic seizures after mTBI remains elevated at about 1.5 times the rate for the general population for 1-4 years after injury.[10] Medications with greater impact upon the seizure threshold, such as clomipramine, maprotiline, and the immediate-release formulation of bupropion, should be avoided in favour of newer agents.[11] The use of benzodiazepines as first-line therapy for anxiety after mTBI is generally not recommended due to potential effects on arousal, cognition, and motor coordination.[12] The potential for abuse/dependency associated with these agents is also of concern, given the elevated rates of pre-injury substance use disorders observed among TBI patients.[13] Nonetheless, short-term use of these agents may be helpful during periods of crisis or acute distress.

Psychological interventions are critical in the management of primary mental health disorders and include supportive counselling and problem-solving strategies, as well as formal psychotherapies. Cognitive-behavioural therapy (CBT) refers to a combination of symptom-focused strategies aimed at improving emotional status and coping abilities by altering maladaptive thought patterns and behaviour. There is robust support for the efficacy of this treatment in a range of mental health disorders among patients without TBI (such as mood/anxiety disorders, PTSD, insomnia, fatigue, chronic pain, and excessive health anxiety/maladaptive illness behaviour). An emerging evidence base supports the use of this modality following mTBI, both to alleviate emotional distress and to manage post-concussive symptoms in general.[13,14] Psychotherapeutic approaches for mental health conditions other than CBT may also be quite appropriate after mTBI but have not been studied.

The decision to recommend psychological intervention will depend on factors such as patient preference and motivation, symptom severity and co-morbidity, skills and experience of the treating clinician, and the ease of access to such resources. Primary care physicians may be well-suited to provide supportive counselling, along with low-intensity interventions based on CBT principles.[15] For more difficult cases, such as moderate to severe depression or anxiety, persistent PTSD, or the presence of complex co-morbities, referral for specialist treatment should be sought. The latter presentations will likely also require pharmacotherapy.

Limited data address the length of time required for continuation therapy after resolution of mood and/or symptoms.[16] Nonetheless, in the absence of strong reasons for early termination (such as tolerance issues), successful pharmacotherapy should be continued for at least 6 months before a trial of slow tapering is considered. Relapse prevention strategies should also be considered within psychological treatment approaches.

RECOMMENDATIONS FOR NON-PHARMACOLOGICAL TREATMENT OF PERSISTENT MENTAL HEALTH DISORDERS		
		GRADE
8.4	Treatment of emotional/behavioural symptoms following mTBI should be based upon individual factors, patient preference, and symptom severity and co-morbidity; it may include psychotherapeutic and/or pharmacological treatment modalities. See Algorithm 8.1 which outlines care pathways for different severities. a. Mild, moderate: consider management by a local health care provider, or referral to a psychologist or psychiatrist if unable to manage. b. Severe: consider referral to a psychologist or psychiatrist as required. [a]	C
8.5	While awaiting specialist referral, the initial steps of treatment should not be delayed, nor symptoms left unmanaged. General measures can be instituted and common symptoms such as headache, sleep disturbance, dizziness, and pain addressed in an ongoing manner.	C
8.6	Cognitive-behavioural therapy (CBT) has well-established efficacy for treatment of primary mood and anxiety disorders; as such, it may be appropriate in the treatment of mood and anxiety symptoms following mTBI.	A

a. Adapted from the *VA/DoD Management of Concussion/Mild Traumatic Brain Injury Clinical Practice Guideline (VA/DoD, 2009).*

RECOMMENDATIONS FOR PHARMACOLOGICAL TREATMENT OF PERSISTENT MENTAL HEALTH DISORDERS		
		GRADE
8.7	When prescribing any medication for patients who have sustained a mTBI, the following should be considered: a. Use caution when initiating pharmacologic interventions to minimize potential adverse effects on arousal, cognition, motivation, and motor coordination. b. Start at the lowest effective dose and titrate slowly upwards, based upon tolerability and clinical response. Allow adequate time and duration for drug trials. c. Avoid making more than one medication change at a time (i.e., when adding new medications or changing doses). Doing "one thing at a time" will enable more accurate assessment of drug benefits and potential adverse effects. d. Follow-up should occur at regular intervals: initially more frequently while increasing medication to monitor tolerability and efficacy. For more details regarding pharmacotherapy after mTBI, refer to Table 8.1. [a]	C
8.8	An SSRI is generally recommended as the first-line pharmacological treatment for mood and anxiety syndromes after mTBI. In some cases, however, the combination of sedative, analgesic, and headache prophylaxis effects from a tricyclic (TCA) may be desirable, yet these agents may generally be considered second-line. Other second-line options include mirtazapine, an alternate SSRI, or an SNRI.	A
8.9	After successful treatment of depression with an SSRI, the optimal duration of continuation/maintenance treatment remains inconclusive.	A
8.10	SSRIs are also recommended as first-line pharmacotherapy for PTSD after mTBI; the SNRI venlafaxine may be considered second-line. Both can improve the core symptom of re-experiencing, hyperarousal, and avoidance. Marked sleep disruption may require adjunctive treatment with trazodone, mirtazapine, or prazosin. Prazosin in particular can decrease trauma-related nightmares. Benzodiazepines do not reduce the core symptoms of PTSD; their long-term use to manage PTSD is not recommended.	C

RESOURCES		
APPENDICES		
1	Patient Health Questionnaire 9-Item Scale (PHQ-9) for Depression	Appendix 8.1
2	Generalized Anxiety Disorder 7-Item Scale (GAD-7)	Appendix 8.2
3	Primary Care PTSD Screen (PC-PTSD)	Appendix 8.3
4	PTSD Checklist (PCL)	Appendix 8.4
5	CAGE Questionnaire	Appendix 8.5
TABLES		
1	General Considerations Regarding Pharmacotherapy after mTBI	Table 8.1
2	Risk Factors Influencing Recovery Post mTBI	Table 1.1
ALGORITHMS		
1	Assessment and Management of Persistent Mental Health Disorders Following mTBI	Algorithm 8.1

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a. Adapted from the *VA/DoD Management of Concussion/Mild Traumatic Brain Injury Clinical Practice Guideline (VA/DoD, 2009).*

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16 Rapoport MJ, Mitchell RA, McCullagh S, Herrmann N, Chan F, Kiss A, et al. A randomized controlled trial of antidepressant continuation for major depression following traumatic brain injury. *Journal of Clinical Psychiatry*. 2010;71(9):1125-1130.

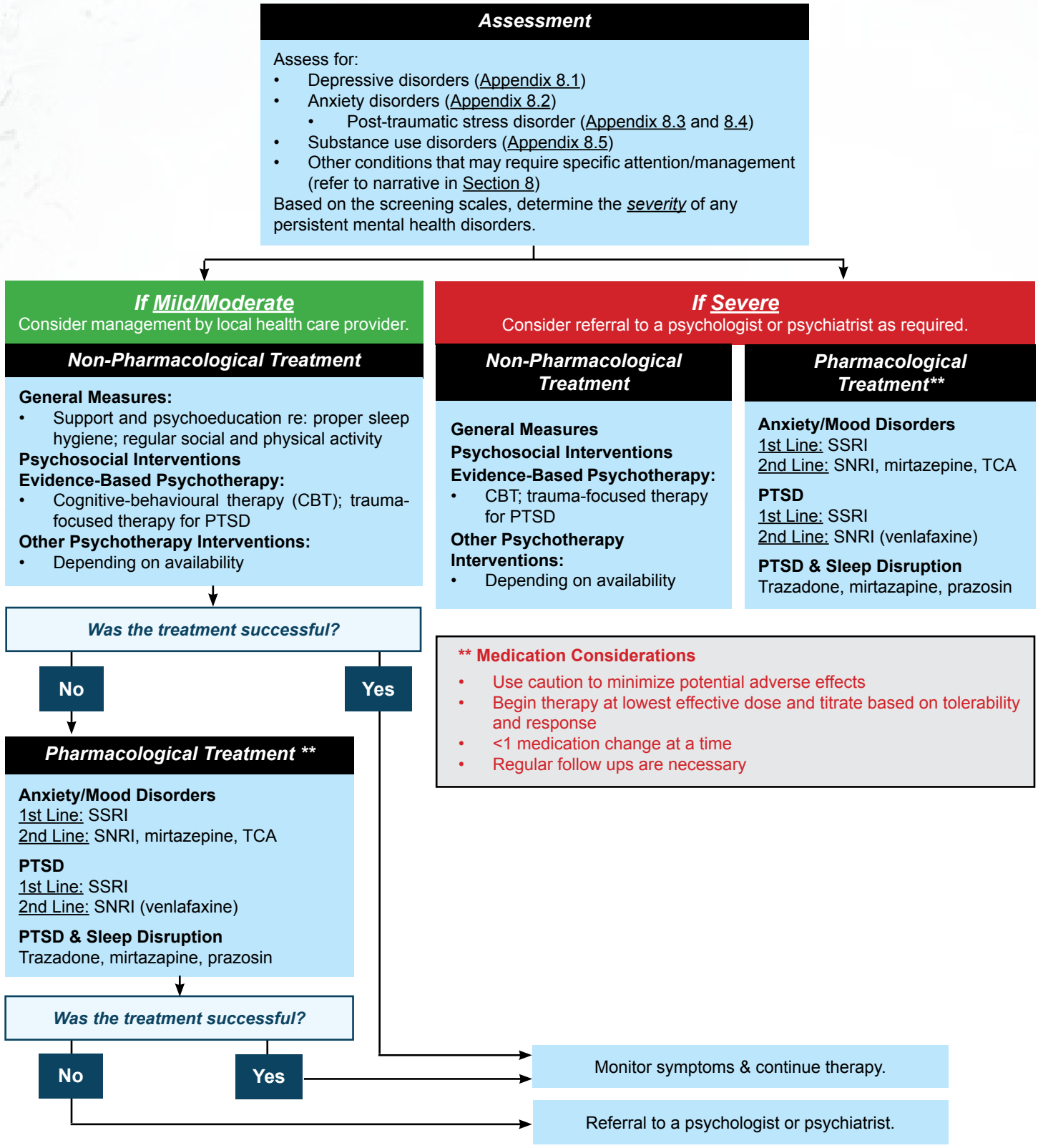
Table 1.1. Risk Factors Influencing Recovery Post mTBI

Medical Factors (red flags): Pre-existing medical conditions or post-injury symptoms that are associated with poor outcomes post mTBI	• Post-traumatic amnesia (PTA) • History of previous traumatic brain injury • History of previous physical limitations • History of previous neurological or psychiatric problems • High number of symptoms reported early after injury • Skull fracture • Early onset of pain and in particular headache within 24 hours after injury • Reduced balance or dizziness during acute stage • Confounding effects of other health-related issues, e.g., pain medications, disabling effects of associated injuries, emotional distress • Presence of nausea after injury • Presence of memory problems after injury
Contextual Factors (yellow flags): Personal, psychosocial, or environmental factors that may negatively influence recovery post mTBI	• Injury sustained in a motor vehicle accident • Potential influence of secondary gain issues related to litigation and compensation • Not returning to work or significant delays in returning to work following the injury • Being a student • Presence of life stressors at the time of the injury • Higher levels of symptom reporting is associated with mood symptoms and heightened self-awareness of deficits • Older age • Lack of social supports • Less education/lower social economic status

Adapted from the Motor Accidents Authority of NSW, Guidelines for Mild Traumatic Brain Injury following a Closed Head Injury (MAA NSW, 2008)

Algorithm 8.1

Assessment and Management of Persistent Mental Health Disorders Following mTBI



For a narrative description and guideline recommendations related to this algorithm, please refer to **Section 8.**

Appendix 8.1

PHQ-9*

Name: _____ **Date**: _____

Over the last two weeks, how often have you been bothered by any of the following problems?
(*Use "✓" to indicate your answer*)

	Not at all (0)	Several days (1)	More than half of the days (2)	Nearly every day (3)
1. Little interest or pleasure in doing things				
2. Feeling down, depressed or hopeless				
3. Trouble falling or staying asleep				
4. Feeling tired or having little energy				
5. Poor appetite or overeating				
6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading the newspaper or watching television				
8. Moving or speaking so slowly that other people could have noticed. Or the opposite - being so figety or restless that you have been moving around a lot more than usual				
9. Thoughts that you would be better off dead, or of hurting yourself				
Add columns:				

(Health care professional: For interpretation of TOTAL, please refer to accompanying scoring card) TOTAL:

10. If you checked off *any problems*, how *difficult* have these problems made it for you to your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

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Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*. 2001;16(9):606-613.

How to Score the PHQ-9

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder
If there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2).

Consider Other Depressive Disorder
If there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2).

Note: Given that the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient. Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

Also, PHQ-9 scores can be used to plan and monitor treatment. To score the instrument, tally each response by the number value under the answer headings, (not at all=0, several days=1, more than half the days=2, and nearly every day=3). Add the numbers together to total the score on the bottom of the questionnaire. Interpret the score by using the guide listed below.

Guide for Interpreting PHQ-9 Scores

Score	Action
0 - 4	The score suggests the patient may not need depression treatment
5 - 14	Mild major depressive disorder. Physician uses clinical judgment about treatment, based on patient's duration of symptoms and functional impairment.
15 - 19	Moderate major depressive disorder. Warrants treatment for depression, using antidepressant, psychotherapy or a combination of treatment.
20 or higher	Severe major depressive disorder. Warrants treatment with antidepressant, with or without psychotherapy, follow frequently.

Functional Health Assessment

The instrument also includes a functional health assessment. This asks the patient how emotional difficulties or problems impact work, things at home, or relationships with other people. Patient responses can be one of four: Not difficult at all, Somewhat difficult, Very difficult, Extremely difficult. The last two responses suggest that the patient's functionality is impaired. After treatment begins, functional status and number score can be measured to assess patient improvement.

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Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*. 2001;16(9):606-613.

Appendix 8.2

GAD-7*

Name: _____ **Date**: _____

Over the last two weeks, how often have you been bothered by any of the following problems?
(*Use "✓" to indicate your answer*)

	Not at all (0)	Several days (1)	More than half of the days (2)	Nearly every day (3)
1. Feeling nervous, anxious or on edge				
2. Not being able to stop or control worrying				
3. Worrying too much about different things				
4. Trouble relaxing				
5. Being so restless that it is hard to sit still				
6. Becoming easily annoyed or irritable				
7. Feeling afraid as if something awful might happen				
Add columns:				

(Health care professional: For interpretation of TOTAL, please refer to accompanying scoring card) TOTAL:

10. If you checked off *any problems*, how *difficult* have these problems made it for you to your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

* May be printed without permission. Available in the public domain.
Spitzer RL, Kroenke K, Williams JB, et al. A brief measure for assessing generalised anxiety disorder: the GAD-7. *Archives of Internal Medicine*. 2006;166:1092-1097.

How to Score the GAD-7

Anxiety severity is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of "not at all," "several days," "more than half the days," and "nearly every day," respectively. GAD-7 total score for the seven items ranges from 0 to 21. Scores of 5, 10, and 15 represent cut points for mild, moderate, and severe anxiety, respectively.

Guide for Interpreting GAD-7 Scores

Score	Interpretation
0 - 4	Normal.
5 - 9	Mild anxiety.
10 - 14	Moderate anxiety.
15 - 21	Severe anxiety.

* When screening for an anxiety disorder, a recommended cut point for further evaluation is a score of 10 or greater.

Using the GAD-7 to Screen for GAD and Other Anxiety Disorders

A score of 10 or greater is the recommended cut point for identifying cases in which a formal diagnosis of GAD may be considered. Elevated GAD-7 scores also raise the possibility that one or more of the other most common anxiety disorders may be present (e.g., panic disorder, PTSD and social phobia).

Functional Health Assessment

The instrument also includes a functional health assessment. This asks the patient how emotional difficulties or problems impact work, things at home, or relationships with other people. Patient responses can be one of four: Not difficult at all, Somewhat difficult, Very difficult, Extremely difficult. The last two responses suggest that the patient's functionality is impaired. After treatment begins, functional status and number score can be measured to assess patient improvement.

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Spitzer RL, Kroenke K, Williams JB, et al. A brief measure for assessing generalised anxiety disorder: the GAD-7. *Archives of Internal Medicine*. 2006;166:1092-1097.

Appendix 8.3

PC-PTSD*

Name: _____ **Date**: _____

In your life, have you ever had any experience that was so frightening, horrible or upsetting that, in the past month, you...

1. Have had nightmares about it or thought about it when you did not want to?

   Yes _____
   No _____

2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?

   Yes _____
   No _____

3. Were constantly on guard, watchful, or easily startled?

   Yes _____
   No _____

4. Felt numb or detached from others, activities, or your surroundings?

   Yes _____
   No _____

Total = _____ / 4

Scoring Instructions

A cut-off score of 3 on the PC-PTSD has been shown to be optimally efficient in distinguishing patients with and without a PTSD diagnosis. However, in primary care settings, it is recommended that patients with a score of 2 or greater should be further assessed.

* Adapted from Prins A, Ouimette P, Kimerling P, Cameron RP, Hugelshofer DS, Shaw-Hegwer J, et al. The primary care PTSD screen (PC-PTSD): Development and operating characteristics. *Primary Care Psychiatry*. 2003;9:9-14.

Appendix 8.4

PCL-CV*

Name: _____ **Date**: _____

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life 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 past month****.*

The event you experienced was _____ on _____(date).

	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 experience from the past?					
2. Repeated, disturbing dreams of a stressful experience from the past?					
3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?					
4. Feeling very upset when something reminded you of a stressful experience from the past?					
5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?					
6. Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?					
7. Avoid activities or situations because they remind you of a stressful experience from the past?					
8. Trouble remembering important parts of a stressful experience from the past?					
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?					
Add Columns:					

TOTAL Severity Score: _____

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

Scoring Instructions

There are several ways in which to score the PTSD Check List (PCL). Perhaps the easiest way to score the PCL is to add up all the items for a total severity score. Possible scores range from 17 to 85. A total score of 30 or above is considered to be PTSD positive for the general population as well as military populations (Bliese, et al., 2008 JCCP). A second way to score the PCL is to treat "moderately" (1 and 2) as non-symptomatic. Then use the DSM-IV scoring rules to make your diagnosis.

- You need an endorsement of at least 1 B item (questions 1-5)
- You need an endorsement of at least 3 C items (questions 6-12)
- You need an endorsement of at least 2 D items (questions 13-17)

However, please note, it is then possible to get a PTSD diagnosis with a total score of 18, which would be very low. It may therefore be best to use a combination of the two approaches. That is, the requisite number of items within each cluster is met at a 3 or above AND the total score is above the specified cut point.

References

Bliese PD, Wright KM, Adler AB, Cabrera O, Castro CA, Hoge, CW. Validating the Primary Care Posttraumatic Stress Disorder Screen and the Posttraumatic Stress Disorder Checklist with soldiers returning from combat. *Journal of Consulting and Clinical Psychology*. 2008;76:272–281.

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

Appendix 8.5

CAGE Questionnaire*

Name: _____ **Date**: _____

Please check the one response to each item that best describes how you have felt and behaved over your whole life.

1. Have you ever felt you should ***cut*** down on your drinking?

   Yes _____
   No _____

2. Have people ***annoyed*** you by criticizing your drinking?

   Yes _____
   No _____

3. Have you ever felt bad or ***guilty*** about your drinking?

   Yes _____
   No _____

4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (***eye***-opener)?

   Yes _____
   No _____

Total = _____ / 4

Additional Information

The CAGE questionnaire was developed by Dr. John Ewing, founding director of the Bowles Center for Alcohol Studies, University of North Carolina at Chapel Hill. CAGE is an internationally used assessment instrument for identifying problems with alcohol. 'CAGE' is an acronym formed from the italicised letters in the questionnaire (cut-annoyed-guilty-eye).

Score of 2 or more warrants seeking professional help.

Ewing, JA. Detecting alcoholism: The CAGE questionnaire. *Journal of the American Medical Association*. 1984;252:1905-1907.

Appendix A

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* The recommendations in this document are those of the Ontario Neurotrauma Foundation, identified by the guideline development team and expert consensus group members, and do not necessarily represent agreement of or endorsement by the Centers for Disease Control and Prevention.

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Appendix B

Other Links/References for Resources to Consider

Section 8: Persistent Mental Health Disorders

Beck Anxiety Inventory (BAI)
A 21-item multiple-choice self-report inventory that is used for measuring the severity of an individual's anxiety. It can be used for screening, diagnosis, and monitoring of therapeutic progress in both inpatient and outpatient settings.

Beck AT, Epstein N, Brown G, Steer RA. An inventory measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*. 1988;56:893–897.

Beck Depression Inventory (BDI-II)
A 21-item multiple-choice self-report inventory that measures characteristic attitudes and symptoms of depression. It can be used for screening, diagnosis, and monitoring of therapeutic progress in both inpatient and outpatient settings. The BDI-II features new items that will bring it in line with current depression criteria of the Diagnostic and Statistical Manual of Mental Disorders - fourth edition (DSM-IV).

Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Archives of General Psychiatry*. 1961;4(6):561–571.

Beck AT, Steer RA, Brown, GK. (1996). Manual for the Beck Depression Inventory-II. San Antonio, TX: Psychological Corporation.