SECTION 8:
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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Published May 2018
The recommendations and resources found within the Guideline for Concussion/mTBI & 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 (mild traumatic brain injury). This guideline is not intended for use with patients or clients under the age of 18 years. This guideline is 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 this guideline.

The recommendations provided in this guideline are informed by best available evidence at the time of publication, and relevant evidence published after this guideline 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.

The developers, contributors and supporting partners shall not be liable for any damages, claims, liabilities, costs or obligations arising from the use or misuse of this material, including loss or damage arising from any claims made by a third party.
General considerations

Mental health disorders are common following mTBI, and appear to be major determinants of post-mTBI wellness and functional recovery. This includes disorders of mood which consist of symptoms related to depression and anxiety. The etiology of mTBI/concussive mood disorders may be related to reactive or environmental factors such as the experience of the trauma resulting in the injury (e.g., manifesting in post-traumatic stress symptoms, phobias and related anxieties) or to the negative outcomes following the injury (i.e., depression related to not participating in important roles such as work or school, sports, etc.) They may also manifest in response to the chronic symptoms that can follow concussion/mTBI or any physical injuries such as poor sleep, persistent headaches, chronic pain, medications, etc. Indeed, all of these types of outcomes can contribute, causally, to distress and to disorders of mood. Reciprocally, in what can be considered a ‘vicious cycle of pathology’, disorders of mood can exacerbate chronic pain, sleep disturbance, anergia and cognitive inefficiencies. This approach to considering disorders of mental health is important when attempting to holistically assess for and manage an individual’s outcomes post-mTBI. The disorders of mood related to increased irritability, intolerance, reduced patience and mood reactivity may be related to the neurobiological impact of the injury and/or a reaction to challenges of managing stimulation early on following the injury.

Mental health symptoms and outcomes must be understood within the biopsychosocial context of the individual and that multiple factors can influence related mental health disorders. In the case of mTBI, biologically the individual may suffer an insult to the brain and injuries to the body (e.g., whiplash injuries, etc.), with consequences to their experience of pain and ability to sleep, which can further cause changes in the neurobiology of the brain. At the psychological level they may experience acute stress due to their experience of trauma or injury, as well as in response to the consequences to their functional abilities resulting from the injury. People with persistent symptoms may become isolated from others as they may be intolerant of or unable to engage in social interactions. Their injury status may disrupt their occupational status, leisure activities and interpersonal interactions. They may also incur losses (e.g., reduced quality of life and independence; lowered income or reduced educational attainment; changes in relationship functioning, etc.). When assessing and managing disorders of mental health post mTBI, it is important to consider all of these potential factors; additionally, individuals who have suffered an mTBI may also have a pre-existing history of biopsychosocial factors/issues that may affect the expression of mental health symptoms or the duration of recovery including the ability to return to pre-injury status.

It is often difficult to obtain timely assessments and treatment interventions from mental health experts. Delays can, and often do, contribute to worse outcomes, and so it is important that primary care providers intervene as soon as possible. Screening for mental health symptoms and determining their etiology as well as prescribing treatment is crucial to facilitating a positive recovery. For example, in a primary care setting this may include screening for disturbances of sleep, or presence of chronic pain, loss, metabolic status etc when patients report low affect. Intervening at the level of improving sleep, managing pain and correcting metabolic imbalances may result in improving reports of low affect. If psychological and social issues appear to be causing mental health symptoms then appropriate therapeutic and/or medication strategies should be employed.

Finally, there is no current evidence to indicate that the mental health problems of individuals who have suffered an mTBI should be treated any differently than mental health problems of other etiologies. For example, we do not have evidence that Major Depressive Disorder (MDD) post-mTBI should be treated differently than MDD that may develop for other psychosocial or biological factors. As such, pharmacological and nonpharmacological interventions including therapeutic interventions that have been found to be helpful in the general population should be considered for individuals who have developed mental health problems post mTBI. Strategies used to treat mental health symptoms post concussion/mTBI should follow the same logic as that applied to similar symptoms found secondary to their conditions or circumstances which include the potential for treatments to worsen other mTBI outcomes. For example, some antidepressant medications, particularly those that are more sedating and/or have greater anticholinergic activity, can worsen the anergia and cognitive impairments that arise directly from mTBI. Another example is the concern for exacerbating seizure risk; fortunately, seizures are a relatively rare outcome of mTBI (although one that must be considered and, depending on the history, assessed for when considering certain psychotropic medications). Some medications can also contribute to worsening of balance impairment, or dizziness, and other symptoms. The need, then, is to select treatment interventions for which there is some evidence of efficacy.
Guidelines for Concussion/mTBI and Persistent Symptoms: 3rd Ed.

Section 8. Mental Health Disorders

RECOMMENDATIONS FOR ASSESSMENT OF MENTAL HEALTH DISORDERS

| GRADE | 8.1 In assessing common post-concussive mental health symptoms, determine whether the symptoms meet criteria for the presence of common mental health disorders, which include but are not limited to:  
  • Depressive disorders (see Appendix 8.1)  
  • Anxiety disorders (see Appendix 8.2) including Post-traumatic Stress Disorder (PTSD) (see Appendices 8.3 and 8.4)  
  • Behavioral changes (e.g. apathy, lability, impulsivity, aggression, irritability)  
  • Emotional regulation issues  
  • Substance use disorders (see Appendix 8.5)  
  • Somatoform disorders  
   Elements of the assessment should include taking a comprehensive history (including discussion with support persons), structured clinical interview, use of self-report questionnaires, and behavioral observation. |

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 scale (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-5; Appendix 8.4); and the CAGE-AID questionnaire for substance use (i.e., alcohol; Appendix 8.5). Note that these questionnaires have not been validated specifically with the mTBI population.
Management

Treatment is indicated when symptom levels cause distress and negatively impact interactions, function and quality of life or clearly are impeding recovery. Once identified, appropriate psychological and/or pharmacological treatment should be initiated. Medication consultation can be provided by a psychiatrist while therapy interventions may be provided by psychologists or other mental health specialists. Treatment should be initiated early to reduce the risk of worsening symptoms and/or having symptoms become entrenched. Medical issues should be managed concurrently such as headaches, dizziness and comorbid pain. Immediate approaches should include concussion/mTBI education regarding the positive expectations for recovery as well as general support, validation and reassurance.\textsuperscript{14-17} Involvement of the family can be very helpful at this stage. Education about regular light exercise should be provided, as well as other important lifestyle information including balanced meals, keeping a routine, seeking social support, etc. General lifestyle measures can have some positive effect on mood, perceived fatigue and well-being, and can counteract deconditioning. See Algorithm 8.1, which outlines care pathways for mild to moderate and severe mental health disorders following concussion/mTBI.

Non-Pharmacological (Psychosocial) interventions

Psychological interventions are critical in the management of primary mental health disorders and include counselling and formal psychotherapies. Cognitive behavioural therapy (CBT) refers to a structured set of strategies focused on managing negative emotion and building coping strategies by altering maladaptive thought patterns and behaviour. There is robust support for the efficacy of this treatment across a range of mental health conditions which include those affecting individuals with concussion/mTBI (e.g., various types of depression and anxieties, insomnia, chronic pain, etc.) with some modifications in procedure indicated for individuals with cognitive challenges.\textsuperscript{9,17-19} The psychotherapeutic intervention applied should be appropriate for the mental health condition diagnosed post concussion/mTBI.\textsuperscript{20} The decision to recommend psychological intervention will depend on factors such as patient preference and motivation, symptom severity and comorbidity, skills and experience of the treating clinician, and the ease of access to such resources. Primary care providers may be well-suited to provide supportive counselling, along with low-intensity interventions based on CBT principles.\textsuperscript{21} For more difficult symptom presentations cases, such as moderate to severe depression or anxiety, persistent PTSD, or the presence of complex comorbidities referral for specialist treatment should be sought. Combined treatment with medication may also be appropriate.

<table>
<thead>
<tr>
<th>RECOMMENDATIONS FOR NON-PHARMACOLOGICAL TREATMENT OF MENTAL HEALTH DISORDERS</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8.2</strong> If a mental health disorder is determined to be present, then the treatment of the emotional/behavioural symptoms should be based upon individual factors, patient preference, symptom severity and comorbidity, and existing practice guidelines for the treatment of the diagnosed condition (e.g., depression, anxiety, PTSD).\textsuperscript{a}</td>
<td>C</td>
</tr>
<tr>
<td><strong>8.3</strong> Immediate referral to a regulated mental health practitioner should be obtained if: • The presentation is complex and/or severe (e.g., suicide risk) • Initial treatment is not effective • There is a failure of or contraindication to usual medication strategies It is not necessary for the mental health practitioner to be someone who has a specialty in the treatment of concussion.</td>
<td>C</td>
</tr>
<tr>
<td><strong>8.4</strong> While awaiting specialist referral, the primary care provider should clinically manage: • Mental health symptoms • General medical issues (e.g., rule out hormonal disturbances, viral infection) • Concussion symptoms (e.g., headache, sleep disturbances, dizziness, pain) • Commence accommodations (return-to-activity, school, work)</td>
<td>C</td>
</tr>
<tr>
<td><strong>8.5</strong> Cognitive behavioural therapy (CBT) and other psychotherapeutic modalities have well-established efficacies for the treatment of primary mood and anxiety disorders in the mental health and other neurological populations; with emerging evidence in the post-concussive population. Given the evidence, psychotherapy should be recommended for patients with persistent mood and anxiety issues following concussion.</td>
<td>A</td>
</tr>
</tbody>
</table>

\textsuperscript{a.} Adapted from the VA/DoD Management of Concussion/Mild Traumatic Brain Injury Clinical Practice Guideline (VA/DoD, 2009).
Pharmacological interventions

Medication may be required for those with moderate to severe, persistent depressive or anxiety symptoms. Selective serotonin reuptake inhibitors (SSRIs) and Serotonin norepinephrine reuptake inhibitors (SNRIs) are recommended as first-line treatments for diagnosed mental health conditions following concussion/mTBI, based upon their side-effect profile and broader utility when compared to agents from other classes.\(^2,22\) Current evidence supports the utility of SSRIs and SNRIs in treating depression, reducing anxiety and irritability, and, in some reports, improving cognition, somatic symptoms and psychosocial function.\(^22\) The efficacy and tolerability of both sertraline\(^23\) (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.\(^1,24\) Common clinical experience suggests that other agents (e.g., alternate SSRIs, venlafaxine, mirtazapine) may also be useful for diagnosed mental health conditions following mTBI, yet clinical data with these agents is lacking. There are no studies indicating specific medication treatment for PTSD with individuals with concussion/mTBI, yet the use of sertraline, paroxetine and venlafaxine are supported by high-quality evidence in the non-TBI population.\(^22,25\) 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 concussion/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 (epilepsy) after concussion/mTBI remains elevated and accounts for 10–20% of epilepsy cases in the general population\(^26\) at about 1.5 times the rate for the general population for 1-4 years after injury.\(^19\) Up to 86% of patients with one seizure after TBI will have a second seizure within 2 years of their injury.\(^27\) 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.\(^28\) The use of benzodiazepines as first-line therapy or in the long-term treatment for anxiety, agitation or aggressiveness after concussion/mTBI is generally not recommended due to potential effects on arousal, cognition, and motor coordination.\(^24,25\) 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.\(^5,24\) Nonetheless, short-term use of these agents may be helpful during periods of crisis or acute distress.

Strategies related to discontinuation of pharmacotherapy should be based on guidelines appropriate to the diagnosed mental health condition. Special consideration is not currently indicated for concussion/mTBI.\(^30\) 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 with psychological treatment approaches.

Table 8.1 General Considerations Regarding Pharmacotherapy after concussion/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 TBI 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 concussion/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.

When prescribing any medication for patients who have sustained a concussion/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 concussion/mTBI, refer to Table 8.1. 

A SSRI is generally recommended as the first-line pharmacological treatment for mood and anxiety syndromes after concussion/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.

After successful treatment with an antidepressant, maintenance treatment for at least 6-9 months is advised to reduce the risk of relapse.

SSRIs or SNRI’s are recommended as first-line pharmacotherapy for PTSD after concussion/mTBI; both can improve the core symptom of re-experiencing, hyperarousal and avoidance.

- Persisting sleep disruption may require adjunctive treatment with trazodone, mirtazapine, low-dose tricyclic 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.

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**REFERENCES**


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Algorithm 8.1
Assessment and Management of Mental Health Disorders Following concussion/mTBI

Assessment
Assess for:
• Depressive disorders (see Appendix 8.1)
• Anxiety disorders (see Appendix 8.2)
  • Post-traumatic stress disorder (see Appendices 8.3 and 8.4)
• Substance use disorders (see Appendix 8.5)
• Other conditions that may require specific attention/management (refer to narrative in Section 8)
Based on the screening scales, determine the severity of any persistent mental health disorders.

If Mild/Moderate
Consider management by local PCP.
Non-Pharmacological Treatment
General Measures:
• Support and psychoeducation re: proper sleep hygiene; regular social and physical activity
Psychosocial Interventions
Evidence-Based Psychotherapy:
• Cognitive behavioural therapy (CBT); trauma-focused therapy for PTSD
Other Psychotherapy Interventions:
• Depending on availability

Was the treatment successful?
No

Pharmacological Treatment**
Anxiety/Mood Disorders
1st Line: SSRI
2nd Line: SNRI, mirtazapine, TCA
PTSD
1st Line: SSRI
2nd Line: SNRI (venlafaxine)
PTSD and Sleep Disruption
Trazadone, mirtazapine, prazosin

Was the treatment successful?
No

Yes

Monitor symptoms and continue therapy.

Yes

Referral to a psychologist or psychiatrist.

If Severe
Consider referral to a psychologist or psychiatrist as required.
Non-Pharmacological Treatment
General Measures
Psychosocial Interventions
Evidence-Based Psychotherapy:
• CBT; trauma-focused therapy for PTSD
Other Psychotherapy Interventions:
• Depending on availability

Pharmacological Treatment**
Anxiety/Mood Disorders
1st Line: SSRI
2nd Line: SNRI, mirtazapine, TCA
PTSD
1st Line: SSRI
2nd Line: SNRI (venlafaxine)
PTSD and Sleep Disruption
Trazadone, mirtazapine, prazosin

** Medication Considerations
• Use caution to minimize potential adverse effects
• Begin therapy at lowest effective dose and titrate based on tolerability and response
• <1 medication change at a time
• Regular follow-ups are necessary

For a narrative description and guideline recommendations related to this algorithm, please refer to Section 8.
## PHQ-9*

<table>
<thead>
<tr>
<th>Name: ______________________________________</th>
<th>Date: ______________________________________</th>
</tr>
</thead>
</table>

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

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

Add columns:

(Healthcare 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?

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Not difficult at all</th>
<th>Somewhat difficult</th>
<th>Very difficult</th>
<th>Extremely difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>
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

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

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.

* May be printed without permission. Available in the public domain.
# Appendix 8.2

## GAD-7*

<table>
<thead>
<tr>
<th>Name: ______________________________________</th>
<th>Date: ______________________________________</th>
</tr>
</thead>
</table>

Over the last two weeks, how often have you been bothered by any of the following problems?

*Use “✓” to indicate your answer*

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

Add columns: [ ] [ ] [ ]

(Healthcare 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?

<table>
<thead>
<tr>
<th>Not difficult at all</th>
<th>Somewhat difficult</th>
<th>Very difficult</th>
<th>Extremely difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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* May be printed without permission. Available in the public domain.
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

<table>
<thead>
<tr>
<th>Score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>Normal.</td>
</tr>
<tr>
<td>5 - 9</td>
<td>Mild anxiety.</td>
</tr>
<tr>
<td>10 - 14</td>
<td>Moderate anxiety.</td>
</tr>
<tr>
<td>15 - 21</td>
<td>Severe anxiety.</td>
</tr>
</tbody>
</table>

* 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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PC-PTSD-5

PC-PTSD-5

Sometimes things happen to people that are unusually or especially frightening, horrible, or traumatic. For example:

- a serious accident or fire
- a physical or sexual assault or abuse
- an earthquake or flood
- a war
- seeing someone be killed or seriously injured
- having a loved one die through homicide or suicide.

Have you ever experienced this kind of event?

YES  NO

If no, screen total = 0. Please stop here.

If yes, please answer the questions below.

In the past month, have you...

1. had nightmares about the event(s) or thought about the event(s) when you did not want to?
   YES  NO

2. tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of the event(s)?
   YES  NO

3. been constantly on guard, watchful, or easily startled?
   YES  NO

4. felt numb or detached from people, activities, or your surroundings?
   YES  NO

5. felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may have caused?
   YES  NO

### Instructions:
Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

<table>
<thead>
<tr>
<th>In the past month, how much were you bothered by?</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Repeated, disturbing, and unwanted memories of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Repeated, disturbing dreams of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Feeling very upset when something reminded you of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.Avoiding memories, thoughts, or feelings related to the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Trouble remembering important parts of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Blaming yourself or someone else for the stressful experience or what happened after it?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Loss of interest in activities that you used to enjoy?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Feeling distant or cut off from other people?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Irritable behavior, angry outbursts, or acting aggressively?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. Taking too many risks or doing things that could cause you harm?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. Being “superalert” or watchful or on guard?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. Feeling jumpy or easily startled?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. Having difficulty concentrating?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. Trouble falling or staying asleep?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
CAGE and CAGE-AID Questionnaire*

CAGE and CAGE-AID Introduction and Scoring

The CAGE questionnaire is used to test for alcohol abuse and dependence in adults. The CAGE-AID version of the tool has been adapted to include drug use. These tools are not used to diagnose diseases, but only to indicate whether a problem might exist. The questions are most effective when used as part of a general health history and should NOT be preceded by questions about how much or how frequently the patient drinks or uses drugs. The reason for this is that denial is very common among persons abusing alcohol or other drugs; and therefore, the CAGE/CAGE-AID questions focus the discussion toward the behavioral effects of the drinking or drug use rather than toward the number of drinks or drugs used per day.

Item responses on the CAGE and CAGE-AID are scored 0 or 1, with a higher score indicating alcohol or drug use problems. A total score of 2 or greater is considered clinically significant, which then should lead the physician to ask more specific questions about frequency and quantity.

The downside of the CAGE/CAGE-AID approach is that questions do not discriminate well between active and inactive drinkers or drug users, so following positive scores on the CAGE with questions regarding usual consumption patterns (e.g., frequency/quantity/heaviest consumption) will help make this distinction.

Screening Tools

CAGE

1. Have you ever felt you should cut down on your drinking?
2. Have people annoyed you by criticizing your drinking?
3. Have you ever felt bad or guilty about your drinking?
4. Eye Opener: Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?

Scoring: Item responses on the CAGE are scored 0 for "no" and 1 for "yes" answers. A higher score is an indication of alcohol problems. A total score of 2 or greater is considered clinically significant.

CAGE-AID (CAGE Questions Adapted to Include Drugs)

1. Have you ever felt you ought to cut down on your drinking or drug use?
2. Have people annoyed you by criticizing your drinking or drug use?
3. Have you felt bad or guilty about your drinking or drug use?
4. Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?

Scoring: Item responses on the CAGE-AID are scored 0 for "no" and 1 for "yes" answers. A higher score is an indication of alcohol problems. A total score of 2 or greater is considered clinically significant.

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