Algorithm 2.1
Initial Management of Symptoms Following Concussion*

A. Module A: Initial Presentation (>7 Days Post-injury)

1. Person injured with head trauma resulting in alteration or loss of consciousness

2. Urgent/ emergent conditions identified? (see sidebar 1)
   - Yes
      3. Refer for emergency evaluation and treatment
   - No
      4. Evaluate for severity of TBI based on history (see sidebar 2)

5. Is the severity moderate or severe TBI?
   - No
      6. Consult with TBI specialist: Exit Algorithm
   - Yes
      7. Diagnosis of concussion: Are symptoms present? (see sidebar 3)

8. - Provide education and access to information regarding concussion (Appendix 1.4)
    - Provide usual care
    - Follow-up as indicated

9. - Continue with Algorithm 5.1: Management of Persistent Symptoms following Concussion
    - Refer for comprehensive evaluation to a specialized brain injury environment

Sidebar 1: Indicators for Immediate Referral

1. Progressively declining level of consciousness
2. Progressively declining neurological exam
3. Pupillary asymmetry
4. Seizures
5. Repeated vomiting
6. Neurological deficit: motor or sensory
7. Double vision
8. Worsening headache
9. Cannot recognize people or disoriented to place
10. Slurred speech
11. Unusual behavior

Sidebar 2: Indicators for Immediate Referral
(If a patient meets criteria for more than one category of severity, the higher severity level is assigned)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Imaging</td>
<td>Normal</td>
<td>Normal or abnormal</td>
<td>Normal or abnormal</td>
</tr>
<tr>
<td>Loss of Consciousness (LOC)</td>
<td>0-30 min</td>
<td>&gt;30 min and &lt;24 hours</td>
<td>&gt;24 hours</td>
</tr>
<tr>
<td>Alteration of Consciousness/ mental state (AOC)*</td>
<td>up to 24 hours</td>
<td>&gt;24 hours; severity based on other criteria</td>
<td></td>
</tr>
<tr>
<td>Posttraumatic Amnesia</td>
<td>0-1 day</td>
<td>&gt;1 and &lt;7 days</td>
<td>&gt;7 days</td>
</tr>
<tr>
<td>Glasgow Coma Scale (GCS) (best available score in 24 hours) **</td>
<td>13-15</td>
<td>9-12</td>
<td>&lt;9</td>
</tr>
</tbody>
</table>

Sidebar 3: Possible Post-Concussion Related Symptoms***

Physical Symptoms:
Headache, dizziness, balance disorders, nausea, fatigue, sleep disturbance, blurred vision, sensitivity to light, hearing difficulties/loss, tinnitus, sensitivity to noise, seizure, transient neurological abnormalities, numbness, tingling, neck pain

Cognitive Symptoms:
Problems with attention, concentration, memory, speed of processing, judgement, executive control

Behavior/ Emotional Symptoms:
Depression, anxiety, agitation, irritability, impulsivity, aggression

*Alteration of mental status must be immediately related to the trauma to the head. Typical symptoms would be: looking and feeling dazed and uncertain of what is happening, confusion, difficulty thinking clearly or responding appropriately to mental status questions, and being unable to describe events immediately before or after the trauma event.

**In April 2015, the DoD released a memorandum recommending against the use of GCS scores to diagnose TBI. See the memorandum for more information.

***Symptoms that may develop within 30 days post-injury.