### Glasgow Coma Scale

<table>
<thead>
<tr>
<th>Eyes Open</th>
<th>Spontaneous</th>
<th>To Speech</th>
<th>To Pain</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Best Verbal Response</td>
<td>Oriented</td>
<td>Confused</td>
<td>Inappropriate</td>
<td>Incomprehensible</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Best Motor Response</td>
<td>Obeys Commands</td>
<td>Localizes Pain</td>
<td>Withdraws</td>
<td>Flexes Pain</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

### Classification of Brain Injury

- **Mild**: LOC less than 30 minutes, GCS 13-15, PTA less than 24 hours
- **Moderate**: LOC greater than 30 minutes, but less than 24 hours, GCS 9-12, PTA 24 hours to 7 days
- **Severe**: LOC greater than 24 hours, GCS 8 or less, PTA more than 7 days

LOC – loss of consciousness; GCS – Glasgow Coma Score; PTA – Post-traumatic amnesia

### Comparison of Coma, Vegetative State, and Minimally Conscious State

<table>
<thead>
<tr>
<th></th>
<th>Coma</th>
<th>Vegetative State</th>
<th>Minimally Conscious State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Opening</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sleep/Wake Cycles</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Visual Tracking</td>
<td>No</td>
<td>No</td>
<td>Often</td>
</tr>
<tr>
<td>Object Recognition</td>
<td>No</td>
<td>No</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Command</td>
<td>No</td>
<td>No</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Communication</td>
<td>No</td>
<td>No</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Contingent Emotion</td>
<td>No</td>
<td>No</td>
<td>Inconsistent</td>
</tr>
</tbody>
</table>

Source: NIDRR 2007 Consciousness Consortium
### LEVEL 1 - (No Response)
Unresponsive to touch, pain, auditory or verbal stimuli.

### LEVEL 2 - (Generalized)
Inconsistent, non-purposeful responses and/or reactions to painful stimuli.

### LEVEL 3 - (Localized Response)
Inconsistent reaction directly related to type of stimulus presented (e.g., touch, pain, auditory or verbal).

### LEVEL 4 - (Confused, Agitated)
Disoriented and unaware of present events with frequent inappropriate behavior (e.g., may yell, hit or bite); attention span is short and ability to process information is significantly impaired.

### LEVEL 5 - (Confused, Inappropriate, Non-agitated)
Non-purposeful, random or fragmented responses when asked to do tasks that may be difficult; patient appears alert and responds to simple commands; performs previously learned tasks, but is unable to learn new ones.

### LEVEL 6 - (Confused, Appropriate)
Behavior is goal-directed; responses are appropriate to the situation with incorrect responses because of memory difficulties.

### LEVEL 7 - (Automatic, Appropriate)
Correct routine responses that are robot-like; appears oriented to setting, but insight, judgment and problem-solving are poor.

### LEVEL 8 - (Purposeful, Appropriate)
Correct responses, carryover of new learning; poor tolerance for stress; some abstract reasoning difficulties. Insight, judgment and problem-solving require minimum assist to supervision.

### LEVEL 9 - (Purposeful, Appropriate)
Able to shift attention and use memory aids. Insight, judgment, problem-solving and self-monitoring require standby assistance.

### LEVEL 10 - (Purposeful, Appropriate)
Independently uses strategies, if needed, for memory, attention, judgment, problem-solving and self-monitoring. Aware of strengths and weaknesses.

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### Early Interventions to Prepare Patient for Rehabilitation
- ROM/positioning (PT, OT)
- Tone management
- Nutritional optimization
- Pulmonary optimization
- Dysautonomia management
- Neuroendocrine assessment
- Swallowing/dysphagia (ST)
- Restriction of overstimulation/noise
- Limitation of narcotic/sedating medications
- Promotion of good sleep/wake cycle

For more information, visit: www.myshepherdconnection.org

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### MAKE A REFERRAL
Contact Shepherd Center’s admissions team to make a referral for patients with a spinal cord injury, brain injury, stroke or neuromuscular diagnosis.

Visit shepherd.org/admissions for more information or call our admissions department at 404-352-2020.

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