

PR04 Glasgow Coma Score

The GCS is scored between 3 and 15, 3 being the worst, and 15 the best. It is composed of three parameters: Best Eye Response, Best Verbal Response, and Best Motor Response, as given below:

Glasgow Coma Score Eye Opening (E) Verbal Response (V) Motor Response (M)

Best Eye Response. (E)	Best Verbal Response. (V)	Best Motor Response. (M)
<ol style="list-style-type: none">1. No eye opening.2. Eye opening to pain.3. Eye opening to verbal command.4. Eyes open spontaneously.	<ol style="list-style-type: none">1. No verbal response2. Incomprehensible sounds.3. Inappropriate words.4. Confused5. Orientated	<ol style="list-style-type: none">1. No motor response.2. Extension to pain.3. Flexion to pain.4. Withdrawal from pain.5. Localizing pain.6. Obeys Commands.
<p>Note that the phrase 'GCS of 11' is essentially meaningless, and it is important to break the figure down into its components, such as Total = E+V+M Displayed as = E3V3M5 = GCS 11.</p> <p>A Coma Score of 13 or higher correlates with a mild brain injury, 9 to 12 is a moderate injury and 8 or less a severe brain injury.</p>		

The Glasgow Coma Scale is the most widely used scoring system used in quantifying level of consciousness following traumatic brain injury. It is used primarily because it is simple, has a relatively high degree of interobserver reliability and because it correlates well with outcome following severe brain injury.

It is easy to use, particularly if a form is used with a table similar to the one above. One determines the best eye opening response, the best verbal response, and the best motor response. The score represents the sum of the numeric scores of each of the categories. There are limitations to its use. If the patient has an endotracheal tube in place, they cannot talk. For this reason, many prefer to document the score by its individual components; so a patient with a Glasgow Coma Score of 15 would be documented as follows: E4 V5 M6. An intubated patient would be scored as E4 V-intubated M6. Of these individual factors, the best motor response is probably the most significant.

Other factors which alter the patient's level of consciousness interfere with the scale's ability to accurately reflect the severity of a traumatic brain injury. So, shock, hypoxemia, drug use, alcohol intoxication, metabolic disturbances may alter the GCS independently of the brain injury. Obviously, a patient with a spinal cord injury will make the motor scale invalid, and severe orbital trauma may make eye opening impossible to assess. The GCS also has limited utility in children, particularly those less than 36 months. In spite of these limitations, it is quite useful and is far and away the most widely used scoring system used today to assess patients with traumatic brain injury.