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0 ratings0% found this document useful (0 votes)6 viewsSaveSave escala de glasgow For Later0%0% found this document useful, undefined The Glasgow Coma Scale is a medical scale designed to assess the depth (and duration) of impaired consciousness and coma states. It helps to measure acute and chronic brain impairment within a trauma scene or during hospitalization; it is also used to predict whether a victim or patient is likely to die (prediction of mortality). Most medical staff know what the Glasgow Coma Scale is and have been specifically trained to use it. Even though non-medical staff might find this scale helpful on the scene of an accident, it is much more important that they work according to the ABC of emergency care – Airway, Breathing, and Circulation. ABC is more important than GCS in an emergency Named after the university in which it was developed by neurosurgeons Graham Teasdale and Bryan Jennett, the Glasgow Coma Scale (GCS) was first published in The Lancet in 1974. Only in the 1980s, when recommended in the first edition of Advanced Trauma and Life Support, did its use become common. The scale is still used today; even though there are various modern Glasgow Coma Scale alternatives, the GCS is one of the quickest methods of determining brain function. The initial version scored on fourteen different points; this was later increased to fifteen with the separation of extension and flexion within motor (movement) responses. In modern emergency, intensive care, and surgical settings the GCS is usually part of a wider group of scales such as the Acute Physiology and Chronic Health Evaluation (APACHE) II score, the Revised Trauma Score, the Trauma and Injury Severity Score (TRISS), and the Circulation, Respiration, Abdomen, Motor, Speech (CRAMS) scale. The GCS is part of the RTS A GCS score is the result of eye movement, verbal reaction, and body movement assessments. These elements will be looked at in more detail in the next section. The Glasgow Coma Scale score indicates levels of arousal and awareness; one does not naturally mean that the other is present. Eye movement is an indication of arousal – by speaking to an individual who has their eyes closed, the eyes will usually open. Even so, a brain vegetative state does not mean that someone always has their eyes closed. People in a coma state can open their eyes to auditory stimuli. A coma scores low on the GCS Awareness is the ability of a person to interact with their environment and with themselves. Lower verbal forms such as moaning can be made when in a vegetative state. A Glasgow Coma Scale of 8 or less indicates a severe injury that has dramatically affected the person's state of consciousness. Scores between 9 and 12 indicate a moderate injury but are also normal scores in a recovery ward. Minor injuries rarely score less than 13 on a Glasgow Coma Scale assessment. Three assessments are made, and it is important to note that the best responses should be measured, not the worst. If, for example, a motor vehicle crash victim switches rapidly between incomprehensible and confused speech, scores should be given for confused speech. As already mentioned, coma patients can open their eyes; this can affect the eye-opening response score given by the Glasgow Coma Scale. One study also reports that coma patients may close their eyes in response to pain rather than open them. However, as the GCS is now integrated into larger neurological function scores like APACHE II, its value as a medical scoring system is not affected. First item – eye opening response Eye-opening responses score from a maximum of four to a minimum of one and are: Eyes open spontaneously Eyes open to verbal stimuli Eye open to pain No response Verbal responses may be the result of existing problems such as speech impediments, dementia, or an unrecognized foreign language; GCS results can change dramatically as a caregiver learns more about the patient. Second item – verbal response A verbal response usually requires a conversation. This is why you will hear paramedics on TV shows asking a patient if they know what day it is or what their name is. Scores of 5 and 4 mean that a form of conversation between two people is occurring. Inappropriate words and incomprehensible speech do not allow for proper conversation. Oriented speech Confused conversation Inappropriate words Incomprehensible speech No response Getting the top score of motor response may be affected by something as simple as a language barrier – a common problem for medical staff at international airports and tourist attractions. Asking someone who does not understand English to "stick out your tongue" will rarely get the required response. To determine flexor or extensor posturing, medical staff usually use pressure on the nail bed as a pain stimulus. Decorticate posturing Obeys commands for movement Purposely moves in response to a painful stimulus Withdraws to pain Decorticate posturing (flexion) in response to pain Decerebrate posturing (extension) in response to pain No response Decorticate posturing (above) relates to a stiff posture with bent arms, clenched fists, and straight legs. The arms are bent towards the body. Decerebrate posturing (below) relates to a similarly stiff posture but with both arms and legs stretched, pointed (down) toes, and arched head and neck. Decerebrate posturing Glasgow Coma Scale interpretation is not as simple as it might seem. Even medically-trained personnel have problems judging whether a patient is conscious or unconscious. Modern medicine also means that many trauma victims are intubated on-scene; it is impossible to measure awareness and arousal at this point. Even the administration of pain medication will affect results. Patients who have been intubated on-scene will have an artificial Glasgow Coma Scale result and are usually assessed using the Full Outline of UnResponsiveness (FOUR) score. Intubation makes GCS scoring difficult Many variables make it difficult to observe the correct level of response. Facial trauma may make assessing eye movement difficult. A foreign victim might not speak the language of the emergency team and be unable to follow commands. A victim may be deaf. Alcohol and drug use can affect all three response parameters. Spinal cord damage will make motor responses and movements in reaction to pain unreliable. Trauma to the eyes can give false GCS results The Glasgow Coma Scale range of scores is not just the sum of all three tests; it measures arousal, verbally-assessed awareness, and motor-assessed awareness separately. The total Glasgow Coma Scale score is a rapid way to determine victim response in an emergency but the separate parts are more important during longer-term care. This means that score expression should be noted both as a total and per element, for example, GCS11 = E5V2M4. A Glasgow Coma Scale 7 result would similarly be split into its elements. This is important for medical staff as GCS7 = E1V3M4 and GCS7 = E2V1M4 could indicate different treatments or diagnoses. Medical staff have to fill in a lot of charts It is impossible to score 0; Glasgow Coma Scale 3 is the lowest possible outcome. Glasgow Coma Scale 15 is the highest possible score. Two pediatric Glasgow Coma Scales have been developed for children under five years of age. The first – for children under two years of age – is a non-verbal scale. The second uses verbal stimuli. Studies show that the PGCS is reliable for young children, especially in the pre-verbal stage. A positive GCS sign The same three responses are measured – eye, verbal, and motor. These responses are also scored in the same way – eye response scores of 1-4, verbal response scores of 1-5, and motor response scores of 1-6. Best eye response scores do not change in either of the pediatric Glasgow Coma Scale versions. Changes are made to adapt to the pre-verbal responses of babies: Coos and babbles Irritable or crying Cries in response to pain Moans in response to pain No response In the over-twos, these scores are: Oriented/appropriate speech Confused speech Incomprehensible words Incomprehensible sounds No response The motor assessment of the pediatric Glasgow Coma Scale scores has also been adapted to fit the responses of the under-fives. For babies and young toddlers (pre-speech): Moves spontaneously and purposefully Withdraws to touch Withdraws to pain Abnormal flexion to pain Abnormal extension to pain No response An unresponsive child is a medical emergency For the under-fives (with speech): Obeys commands Localizes to pain Withdraws to pain Abnormal flexion to pain Abnormal extension to pain No response Bibliography Jain S, Iverson LM. (Updated 2020). Glasgow Coma Scale. Treasure Island (FL): StatPearls Publishing. Retrieved from: Acton QA, (Ed.). (2012). 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Previous Indexing Brain Injuries (1976-1989) Coma (1976-1989) Head Injuries (1976-1989) Severity of Illness Index (1986-1989) Public MeSH Note91; was see under TRAUMA SEVERITY INDICES 1990 History Note91(90); was see under TRAUMA SEVERITY INDICES 1990 Date Established 1991/01/01 Date of Entry 1989/05/25 Revision Date 2018/06/29 Glasgow Coma Scale Preferred Concept UIM0023945 Scope NoteA scale that assesses the response to stimuli in patients with craniocerebral injuries. The parameters are eye opening, motor response, and verbal response. Terms Glasgow Coma Scale Preferred Term Term UI T046167 Date01/01/1999 LexicalTag EPO ThesaurusID NLM (1990) Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. 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Dirkipa, MD, Kaitlyn Murphy, MD, Robert Jones, MD & David Effron, MD By Mark L. Plaster, MD, JD & Jondavid Landon, MD, RDCS, RDMS By Dr. Seamus Mangan, Dr. Sandy Najarian & David Effron, MD By EM Coach February 22, 2023 By Mark L. Plaster, MD, JD June 18, 2020 By Michael Silverman, MD July 30, 2020 By Mark L. Plaster, MD, JD, Salim R. Rezaie, MD & William Sullivan, DO, JD July 30, 2020 By Matt Strain March 03, 2020 By Debjeet Sarkar, MD & 2LT Mark Winters September 04, 2019 By EM Coach November 04, 2019 August 12, 2019 By Debjeet Sarkar, MD & AJ Folsom August 24, 2018 Is a patient's GCS score a strong indicator? Advanced airway management, including tracheal intubation, is used for ventilatory or oxygenation failure, impending airway compromise, or inability to protect the airway. The evaluation of a patient's risk for aspiration can be highly subjective. One common adage states: "If the GCS is less than 8, then intubate," offering a seemingly simple and more objective standard to guide airway management.ADVERTISEMENT Using the Glasgow Coma Scale (GCS) score of 8 or below to evaluate the need for intubation is promoted by the ATLS course and the East Association for the Surgery of Trauma (EAST) practice management guidelines.[1] [2] This practice is also commonly applied to patients with non-traumatic causes of obtundation. However, the evidence behind this practice is not clear, prompting many to re-examine this oft-repeated maxim. Glasgow Coma ScaleADVERTISEMENT The Glasgow Coma Scale was created in 1974 as a system to evaluate and document the level of consciousness in patients with head injuries. [3] It is comprised of three subscales: motor response, verbal response and eye movement. While the GCS was not initially designed to be summed into one score, this practice became widely adopted.[4] Today, the GCS remains a key component in the evaluation of patient's level of consciousness, its use spanning across emergency medicine, pre-hospital care, neurosurgery and trauma surgery. Despite its widespread use, the GCS score has been criticized for its complexity and lack of consistent reliability, demonstrated across several studies.[5] Concordance between attending emergency physicians in calculating GCS scores have been reported as low as 38%. In a third of cases, GCS scores on the same patient varied by two or more points.[6]ADVERTISEMENT In a prospective study of neurologists evaluating GCS scores, exact inter-rater agreement was 71% for 267 consecutive patients in the ICU.[7] This variation in calculating a patient's GCS score can have significant changes in therapy if utilizing hard cut-offs to decide critical decisions such as airway management. Gag and Cough Reflex The general principle behind intubating a patient for a GCS < 8 is the theoretical loss of protective airway reflexes. Moulton et al. demonstrated a strong correlation with decreasing GCS and the absence of a gag reflex[8]. However, the same study showed that many patients with GCS above 8 also had attenuated or absent gag reflexes, especially when they were exposed to sedative medications. Conversely, several patients with GCS < 8 maintained their gag reflex. [8] A subsequent prospective observational study of 208 adult patients by Rotheray et al. revisited this issue. While the analysis showed a significant correlation between reduced GCS and absence of cough and gag reflexes, it also found that 36% of patients with GCS < 8 maintained a normal gag reflex and 24% maintained a normal cough reflex. Similar to the Moulton study, this study also found that between one-fourth to one-fifth of patients with a normal GCS had an absent gag or cough reflex.[9] While there is correlation between protective airway reflexes and level of consciousness, exceptions to this rule warrant evaluation of airway reflexes independent of the GCS. A GCS of 3 does not guarantee the absence of airway reflexes in the same manner that a "normal" GCS does not guarantee presence of airway reflexes. Further complicating the matter, evaluation of a patient's gag reflex also raises the risk of inducing emesis and leading to an aspiration event. Aspiration with decreased GCS While assessment of airway reflexes is theoretically important for the evaluation of airway protection, current studies have not shown a consistent relationship between a reduced GCS and adverse events such as aspiration. Adnet et al. found increased frequency of suspected aspiration pneumonia in patients admitted to the Toxicologic ICU with a GCS < 8. However, 10/68 patients with GCS of 9-14 also had radiographic evidence of aspiration, again highlighting the risk of airway compromise in more alert patients.[10] A 2017 retrospective analysis of 528 patients with carbon monoxide intoxication found that altered mental status (AMS) on arrival, defined as GCS < 8, was strongly associated with the development of aspiration pneumonia with an odds ratio of 9.46. The same study found significantly increased ventilator use, length of hospital stay and in-hospital mortality. However, this study was limited by its broad definition of AMS, which didn't factor in the clinical heterogeneity of a GCS range of 3-8.[11] It is also important to question how often witnessed aspiration leads to development of clinically relevant disease. In a study looking at rates of hospital-acquired pneumonia in 228 patients admitted to a level 1 trauma center ICU, witnessed aspiration was significantly associated with development of hospital-acquired pneumonia. However, the overall mortality, ICU length of stay and duration of mechanical ventilation did not vary significantly with witnessed aspiration.[12] In contrast, some prospective observational studies found significantly lower rates of aspiration pneumonia/pneumonitis in patients with impaired consciousness. In 2009, Duncan et al followed 73 patients with decreased level of consciousness secondary to intoxication, the GCS ranging from 3 to 14.[13] Twelve of these patients had an initial GCS < 8 and 5 patients with a GCS of 3. None of these patients had episodes of aspiration and none required endotracheal intubation. Notably the one patient who required intubation had a GCS of 12 on admission. While several patients required some level of airway support, such as nasopharyngeal or oropharyngeal airways, most patients rapidly improved to their baseline level of consciousness within 24 hours. This evidence suggests that certain unconscious or obtunded patients can be safely monitored for clinical improvement without a definitive airway. In the trauma setting, early intubation is often considered in the context of traumatic brain injury (TBI) to avoid aspiration and hypoxia leading to secondary brain injury.[14] Additionally, there can be significant uncertainty whether a patient's decreased cognition is due to TBI or intoxication. Much of the research in patients with traumatic injuries has focused on mortality as an outcome, rather than aspiration. In a prospective study of 412 adult major trauma victims with severe TBI and initial GCS score of 3-8 per paramedics, the sole use of a GCS score did not accurately predict patient desaturation, clinical aspiration, or duration of ICU stay.[15] Furthermore, a retrospective analysis of 6,676 patients presenting with a GCS between 6-8, drawn from the National Trauma Data Bank found that more patients with a GCS of 6 were intubated compared to GCS of 8, 64.3% and 56.9% respectively. Additionally, they found that intubation was significantly associated with increased odds of mortality, longer ICU stay, and overall hospital length of stay.[16] Bottom-line The evidence for using a patient's GCS score as an indication for intubation is mixed. Recent review articles have highlighted the paucity of strong evidence behind the classic adage of "GCS less than 8, intubate".[17] The evaluation of a patient's GCS can vary significantly between providers. While multiple retrospective studies have shown an association between a depressed level of consciousness and aspiration, several prospective studies have contradicted this and appear to show a significantly lower risk of aspiration in these patients. Furthermore, the presence or absence of airway reflexes should not be assumed based on a patient's GCS. One may elect to test a patient's gag or cough reflexes at bedside, understanding that it may also induce vomiting. The Glasgow coma scale can be utilized as one factor to help dictate airway management, but rigid use of a GCS cut-off for intubation is not currently supported by robust evidence. In light of this, emergency physicians should use their gestalt and individually assess each patient's likelihood of airway compromise. References Committee on Trauma, American College of Surgeons. In: Advanced Trauma Life Support Student Course Manual. Chicago, IL: American College of Surgeons; 2018. Mayglothling J et al. 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PMID: 16243194 Hatchimonji, JS et al. Questioning dogma: does a GCS of 8 require intubation?. European journal of trauma and emergency surgery : official publication of the European Trauma Society, 1–7. Advance online publication. 2020. PMID: 32382780 Orso D et al. Endotracheal intubation to reduce aspiration events in acutely comatose patients: a systematic review. Scand J Trauma Resusc Emerg Med. 2020. PMID: 33303004 Neurological scale for recording the conscious state of a person Not to be confused with Glasgow Outcome Scale. Medical diagnostic method Glasgow Coma ScaleMeSHD015600LOINC35088-4 The Glasgow Coma Scale[1] (GCS) is a clinical scale used to reliably measure a person's level of consciousness after a brain injury. The GCS assesses a person based on their ability to perform eye movements, speak, and move their body. These three behaviours make up the three elements of the scale: eye, verbal, and motor. A person's GCS score can range from 3 (completely unresponsive) to 15 (responsive). This score is used to guide immediate medical care after a brain injury (such as a car accident) and also to monitor hospitalised patients and track their level of consciousness. Lower GCS scores are correlated with higher risk of death. However, the GCS score alone should not be used on its own to predict the outcome for an individual person with brain injury. The Glasgow Coma Scale is used for people above the age of two and is composed of three tests: eye, verbal, and motor responses. The scores for each of these tests are indicated in the table below. Glasgow Coma Scale [2] Test Not Testable (NT): Examples 1 2 3 4 5 6 Eye (ocular response) Severe trauma to the eyes, enucleation Does not open eyes Opens eyes in response to pain[a] Opens eyes in response to voice Opens eyes spontaneously N/A N/A Verbal (oral response) Intubation, non-oral language disability, linguistic barrier Makes no sounds Incomprehensible sounds Inappropriate words Confused and disoriented, but able to answer questions Oriented to time, person, and place, converses normally N/A Motor (motoric response) Paralysis/hemiparesis (acquired causes such as post-stroke, post-neurological injury; congenital/innate such as cerebral palsy) Makes no movements Abnormal extension (decerebrate posture)[b] Abnormal flexion (decorticate posture) Flexion / Withdrawal from painful stimuli Moves to localise pain Obeys commands The Glasgow Coma Scale is reported as the combined score (which ranges from 3 to 15) and the score of each test (E for eye, V for Verbal, and M for Motor). For each test, the value should be based on the best response that the person being examined can provide.[6] For example, if a person obeys commands only on their right side, they get a 6 for motor. The scale also accounts for situations that prevent appropriate testing (Not Testable). When specific tests cannot be performed, they must be reported as "NT" and the total score is not reported. The results are reported as the Glasgow Coma Score (the total points from the three tests) and the individual components. As an example, a person's score might be: GCS 12, E3 V4 M5. Alternatively, if a patient was intubated, their score could be GCS E2 V NT M3. Main article: Paediatric Glasgow Coma Scale Children below the age of two struggle with the tests necessary for assessment of the Glasgow Coma Scale. As a result, a version for children has been developed, and is outlined below. Pediatric Glasgow Coma Scale [7] Not Testable (NT) 1 2 3 4 5 6 Eye Ex: severe trauma to the eyes Does not open eyes Opens eyes in response to pain Opens eyes in response to sound Opens eyes spontaneously N/A N/A Verbal Ex: Intubation Makes no sounds Moans in response to pain Cries in response to pain Irritable/Crying Coos/Babbles N/A Motor Ex: Paralysis Makes no movements Extension to painful stimuli (decerebrate response) Abnormal flexion to painful stimuli (decorticate response) Withdraws from pain Withdraws from touch Moves spontaneously and purposefully Individual elements as well as the sum of the score are important. Hence, the score is expressed in the form "GCS 9 = E2 V4 M3 at 07:35". Patients with scores of 3 to 8 are usually considered to be in a coma.[8] Generally, brain injury is classified as: Severe, GCS ≤ 8 Moderate, GCS 9–12 Minor, GCS ≥ 13.[9] Tracheal intubation and severe facial/eye swelling or damage make it impossible to test the verbal and eye responses. In these circumstances, the score is given as 1 with a modifier attached (e.g. "E1c", where "c" = closed, or "V1t" where t = tube). Often the 1 is left out, so the scale reads Ec or Vt. A composite might be "GCS 5tc". This would mean, for example, eyes closed because of swelling = 1, intubated = 1, leaving a motor score of 3 for "abnormal flexion". The GCS has limited applicability to children, especially below the age of 36 months (when the verbal performance of even a healthy child would be expected to be poor). Consequently, the Paediatric Glasgow Coma Scale was developed for assessing younger children. During the 1960s, assessment and management of head injuries became a topic of interest. The number of head injuries was rapidly increasing, in part because of increased use of motorised transport. Also, doctors recognised that after head trauma, many patients had poor recovery. This led to a concern that patients were not being assessed or medically managed correctly.[10] Appropriate assessment is a critical step in medical management for several reasons. First, a reliable assessment allows doctors to provide the appropriate treatment. Second, assessments let doctors keep track of how a patient is doing, and intervene if the patient is doing worse. Finally, a system of assessment allows researchers to define categories of patients. This makes it possible to determine which treatments are best for different types of patients. A number of assessments for head injury ("coma scales") were developed, though none were widely adopted. Of 13 scales that had been published by 1974, all involved linear scales that defined levels of consciousness.[11][12][13][14][15][16][17][18][19] These scales posed two problems. First, levels of consciousness in these scales were often poorly defined. This made it difficult for doctors and nurses to evaluate head injury patients. Second, different scales used overlapping and obscure terms that made communication difficult.[20] In this setting, Bryan Jennett and Graham Teasdale of the University of Glasgow Medical School began work on what became the Glasgow Coma Scale. Based on their experiences, they aimed to make a scale satisfying several criteria. First, it needed to be simple, so that it could be performed without special training. Second, it needed to be reliable, so that doctors could be confident in the results of the scale. Third, the scale needed to provide important information for managing a patient with a head injury.[20] Their work resulted in the 1974 publication of the first iteration of the GCS.[1] The original scale involved three exam components (eye movement, motor control, and verbal control). These components were scored based on clearly defined behavioural responses. Clear instructions for administering the scale and interpreting results were also included. The original scale is identical to the current scale except for the motor assessment. The original motor assessment included only five levels, combining "flexion" and "abnormal flexion". This was done because Jennett and Teasdale found that many people struggled in distinguishing these two states.[1] In 1976, Teasdale updated the motor component of the Glasgow Coma Scale to differentiate flexion movements.[2] This was because trained personnel could reliably distinguish flexion movements. Further research also demonstrated that normal and abnormal flexion have different clinical outcomes.[21] As a result, the six-point motor scale is now considered the standard. Teasdale did not originally intend to use the sum score of the GCS components.[20] However, later work demonstrated that the sum of the GCS components, or the Glasgow Coma Score, had clinical significance. Specifically, the sum score was correlated with outcome (including death and disability).[21] As a result, the Glasgow Coma Score is used in research to define patient groups. It is also used in clinical practice as shorthand for the full scale. The Glasgow Coma Scale was initially adopted by nursing staff in the Glasgow neurosurgical unit.[20] Especially following a 1975 nursing publication, it was adopted by other medical centres.[22] True widespread adoption of the GCS was attributed to two events in 1978.[20] First, Tom Langfitt, a leading figure in neurological trauma, wrote an editorial in Journal of Neurosurgery strongly encouraging neurosurgical units to adopt the GCS score.[23] Second, the GCS was included in the first version of Advanced Trauma Life Support (ATLS), which expanded the number of centres where staff were trained in performing the GCS.[24] The GCS has come under pressure from some researchers who take issue with the scale's poor inter-rater reliability and lack of prognostic utility.[25] Although there is no agreed-upon alternative, newer scores such as the simplified motor scale and FOUR score have also been developed as improvements to the GCS.[26] Although the inter-rater reliability of these newer scores has been slightly higher than that of the GCS, they have not yet gained consensus as replacements.[27] AVPU scale Blantyre coma scale Early warning score Revised Trauma Score Triage ^ a b c d Teasdale G, Jennett B (July 1974). 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"The conundrum of the Glasgow Coma Scale in intubated patients: a linear regression prediction of the Glasgow verbal score from the Glasgow eye and motor scores". The Journal of Trauma. 44 (5): 839–44, discussion 844–5. doi:10.1097/00005373-199805000-00016. PMID 9603086. Glasgow Coma Scale at 40 | The new approach to Glasgow Coma Scale assessment (YouTube video on the Glasgow Coma Scale) ^ A peripheral pain stimulus, such as squeezing the lunula area of the person's fingernail, is more effective than a central stimulus such as a trapezius squeeze, as the latter tends to make the patient close their eyes and grimace instead.[3] ^ Different guidelines report different evaluation of abnormal extension. While some sources indicate extension at the elbow is sufficient,[4] other sources use the language "decerebrate posturing".[5] It is important to note that the original publication of the Glasgow Coma Scale explicitly avoided the term "decerebrate extension" because it implied specific anatomical findings.[1] Retrieved from " The Glasgow Coma Scale (GCS) is used to objectively describe the extent of impaired consciousness in all types of acute medical and trauma patients. The scale assesses patients according to three aspects of responsiveness: eye-opening, motor, and verbal responses. Reporting each of these separately provides a clear, communicable picture of a patient. The findings in each component of the scale can aggregate into a total Glasgow Coma Score which gives a less detailed description but can provide a useful summary of the overall severity. The Glasgow Coma Scale and its total score have since been incorporated in numerous clinical guidelines and scoring systems for victims of trauma or critical illness. This activity describes the use of the Glasgow Coma Scale and reviews the role of using the scale for the interprofessional team to successfully communicate a patients condition. Objectives: Explain the value of the Glasgow Coma Scale for patient care.Outline the three areas the Glascow Coma Scales assesses.Summarize the severity findings for each range of the Glascow Coma Scale.Review how the interprofessional team can use the Glasgow Coma Scale to communicate regarding a patients condition. Access free multiple choice questions on this topic. The Glasgow Coma Scale was first published in 1974 at the University of Glasgow by neurosurgery professors Graham Teasdale and Bryan Jennett.[1] The Glasgow Coma Scale (GCS) is used to objectively describe the extent of impaired consciousness in all types of acute medical and trauma patients. The scale assesses patients according to three aspects of responsiveness: eye-opening, motor, and verbal responses. Reporting each of these separately provides a clear, communicable picture of a patient's state.The findings in each component of the scale can aggregate into a total Glasgow Coma Score which gives a less detailed description but can provide a useful 'shorthand' summary of the overall severity.[2] The score expression is the sum of the scores as well as the individual elements. For example, a score of 10 might be expressed as GCS10 = E3V4M3.The use of the Glasgow Coma Scale became widespread in the 1980s when the first edition of the Advanced Trauma and Life Support recommended its use in all trauma patients. Additionally, the World Federation of Neurosurgical Societies (WFNS) used it in its scale for grading patients with subarachnoid hemorrhage in 1988,[3] The Glasgow Coma Scale and its total score have since been incorporated in numerous clinical guidelines and scoring systems for victims of trauma or critical illness.[4] These cover patients of all ages, including preverbal children. The Glasgow Coma Scale is a required component of the NIH Common Data Elements for studies of head injury and the ICD 11 revision and is used in more than 75 countries.[5][4][6] Scoring and Parameters The Glasgow Coma Scale divides into three parameters: best eye response (E), best verbal response (V) and best motor response (M). The levels of response in the components of the Glasgow Coma Scale are 'scored' from 1, for no response, up to normal values of 4 (Eye-opening response) 5 (Verbal response) and 6 (Motor response)The total Coma Score thus has values between three and 15, three being the worst and 15 being the highest. The score is the sum of the scores as well as the individual elements. For example, a score of 10 might be expressed as GCS10 = E3V4M3. Best eye response (4) No eye openingEye opening to painEye opening to soundEyes open spontaneously Best verbal response (5) No verbal responseIncomprehensible soundsInappropriate wordsConfusedOrientated Best motor response (6) No motor response.Abnormal extension to pain Abnormal flexion to pain Withdrawal from painLocalizing painObeys commands Application of the Glasgow Coma Scale in Pediatrics The Glasgow Coma Scale can be used in children older than 5 years with no modification. Younger children and infants are not able to provide the necessary verbal responses for the practitioner to use the scale to assess their orientation or obey the commands to evaluate their motor response. Since a Pediatric Glasgow Coma Scale was initially described in Adelaide, there have been several modifications without any particular one becoming universally accepted.[7] The versions below derive from those of James and the Pediatric Emergency Care Applied Research Network[8][6] Children less than 2 years old (pre-verbal) / Children greater than 2 years old (verbal) Best eye response No eye opening / 1 No eye opening Eye opening to pain / 2 Eye opening to painEye opening to sound / 3 Eye opening to soundEyes open spontaneously / 4 Eyes open spontaneously Best verbal response None / 1 NoneMoans in response to pain / 2 Incomprehensible soundsCries in response to pain /