



Neurocritical Care Society

A Position Statement for Healthcare

Professionals from the Neurocritical Care Society

Recommendations for the Critical Care Management of Devastating Brain Injury: Prognostication, Psychosocial, and Ethical Management

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Purpose

- The purpose of these recommendations are to review the available evidence to guide clinical decision making in devastating brain injury (DBI).
- Specific aspects covered in these recommendations include prognostication, psychosocial issues, and ethical considerations.



Process

- The Neurocritical Care Society (NCS) selected a multidisciplinary panel of experts from neurocritical care, neuroanesthesia, neurology, neurosurgery, emergency medicine, nursing, and pharmacy.
- The panel was divided into topic-related working groups according to expertise.
- Extensive literature search was conducted, and quality of evidence was assessed using the GRADE system.

Methods

GRADE System

Classifies recommendations as strong or weak based on:

- Balance of risk vs benefit
- Patient preferences
- Cost
- Quality of Evidence

Quality of Evidence

- **High**: Further research very unlikely to change the estimate of effect.
- **Moderate**: Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
- **Low**: Further research very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.
- **Very Low**: Any estimate of effect is uncertain.



Topics Covered

- Standardizing definition of DBI
- Prognostication in the setting of DBI
- Psychosocial Issues related to DBI
- Ethical Considerations for DBI



Definition of DBI



Definition of DBI: Recommendations

- **Strong recommendation, expert opinion**
 - Devastating brain injury (DBI) is defined as:
 - Neurological injury where there is an immediate threat to life from a neurologic cause OR
 - Severe neurological insult where early limitation of therapy (defined as treatment of disease) is being considered in favor of an emphasis on care
 - i.e., the provision of comfort measures

Prognostication in DBI



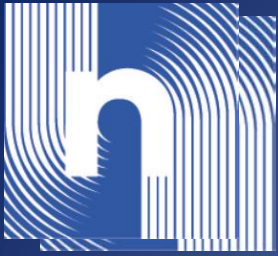
Prognostication in DBI: Recommendations

- **Strong recommendation, moderate quality of evidence**
 - Determine prognosis from repeated examinations over time to establish greater confidence and accuracy.
 - Apply DBI guidelines in the early stages of treatment in order to maintain physiologic stability - even when early limitation of aggressive care is being considered.
 - Early implementation prevents unwarranted deterioration and allows sufficient opportunity for prognostic evaluation, care planning, and consideration of organ donation.



Impact of Early Prognostication in DBI (Less than 72 hours): Recommendation

- **Strong recommendation, moderate quality of evidence**
 - Use a 72-hour observation period to determine clinical response and delay decisions regarding withdrawal of life-sustaining treatment in the interim.



Prognostication Based on Risk Factors: Recommendations

- **Strong recommendation, moderate quality of evidence**
 - Consider all known prognostic variables in determining risk of death.
 - Prognostication should be based on individualized assessment of risk factors, rather than on clinical scoring systems.



Psychosocial Management



Recommendation for Family Needs

- **Strong recommendation, low quality of evidence**
 - Clinicians should anticipate family needs for information, allow proximity to the patient, provide emotional support, and assess for unmet additional needs specific to the individual(s).



Meeting the Needs of Family Members: Recommendations

- **Strong recommendation, low quality of evidence**
 - Provide early, frequent, and consistent multi-disciplinary communication regarding patient condition.
 - Provide clear information regarding condition and prognosis, including a discussion of prognostic uncertainty, if appropriate.



Meeting the Needs of Family Members: Recommendations

- **Weak recommendation, low quality of evidence**
 - Consider the use of a family support specialist to improve ongoing education and support.
- **Strong recommendation, low quality of evidence**
 - Encourage family proximity and involvement in care, when desired by the family.



Assisting Surrogate Decision Making: Recommendations

- **Strong recommendation, low quality of evidence**
 - Identify the healthcare proxy and the preferred decision-making approach early.
 - Prioritize information sharing with the healthcare proxy.
 - Stagger information delivery when possible to minimize cognitive and emotional overload.



Assisting Surrogate Decision Making: Recommendations

- **Strong recommendation, low quality of evidence**
 - Focus on clinical decision-making based on the patient's preferences, goals, and values.
 - Provide assurance to proxies that compassionate and quality care will continue, regardless of withdrawal decisions.
 - Early involvement of resources such as social services, religious leaders, and palliative care.



Ethics



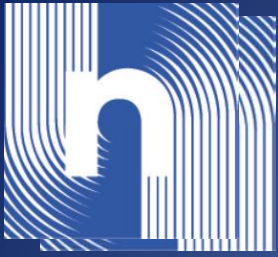
Who Should Be Resuscitated: Recommendations

- **Strong recommendation, expert opinion**
 - When resources allow, all DBI patients without a known pre-existing objection to treatment should be aggressively resuscitated for an initial period to maximize the likelihood of potential neurologic recovery, and increase the opportunity for organ donation.
 - The consent for initial resuscitation ought to be assumed unless there is a pre-existing known objection and should not be dependent on organ donor status.



DBI Care and Organ Donor Status: Recommendation

- **Strong recommendation, expert opinion**
 - Notification of DBI patient donor status during the resuscitative period, if done, should not alter resuscitative efforts.



Ethical Principles of Justice: Recommendations

- **Strong recommendation, expert opinion**
 - Resuscitation of the DBI patient should not be dependent on the possibility of organ donation.
 - If resuscitative efforts are futile, and no option for organ donation exists, there is no obligation to continue resuscitation of the DBI patient.



Ethical Principles of Justice: Recommendations

- **Strong recommendation, expert opinion**
 - Use appropriate analgesic and sedative medication in DBI patients to relieve undue suffering, regardless of secondary circumstances, such as futility, organ donation, and need for prognostication.
 - Palliative sedation should not exclude the possibility of organ donation.



Autonomy in DBI: Recommendations

- **Strong recommendation, expert opinion**
 - In the absence of evidence to the contrary, DBI patients should be resuscitated in an attempt to respect autonomy.
 - Clinicians should respect legitimate directives to restrict resuscitative efforts in DBI patients.