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**Proving Damages In A
Traumatic Brain Injury Case**

The number of people who sustain a traumatic brain injury every year in the United States is staggering. Approximately 1.4 million people sustain brain injuries every year; 50,000 of these people die; 35,000 are hospitalized and 1.2 million are simply released to their poorly trained care-givers. Not included in these figures are the number of individuals who sustain a brain injury due to medical negligence, which so often occurs as a result of a failure to diagnose or treat properly and/or timely. No matter the mechanism of injury, the effects of a brain injury can be devastating. The plaintiff's lawyer should be sensitive to this fact and proceed accordingly.

The lawyer should recognize that brain injury survivors experience a wide range of functional changes in cognition, language, emotion and behavior. Their clients will also be susceptible to medical mismanagement, burns and falls due their physical problems with balance, visual perception impairment and sensory impairment, as well as memory and judgment impairment. The plaintiff's lawyer should not be surprised to find that as a result of these functional deficits, your brain injured clients may frequently experience financial

and vocational difficulties. Therefore, obtaining a history from the care-givers as well as the injured survivor is imperative.

When obtaining the clients history, keep in mind that the functional deficits your brain injured clients suffer from also have devastating effects on the family unit. Spouses of brain injury survivors often feel as though they are suddenly married to a different person other than the original life partner they married. The children of brain injury survivors may experience emotional neglect or abuse as well as depression, because Mom or Dad have become different people. These children often require an increase in emotional support from the uninjured parent and extended family to help them manage the emotional changes they may be experiencing, as they witness the changes in the behavior of the brain injured parent. All of these factors, and much more, must be thoroughly explained to the jury, so they can fully appreciate the devastating effects a brain injury can have on the survivor and their family. Therefore, proving damages in a brain injury case is critical to a successful plaintiff's verdict.

However, before you can effectively prove the damages on behalf of your brain injured client, you must fully understand the facts regarding brain injury. The National Institute of Neurological Disorders and Stroke defines traumatic brain injury as follows:

“Traumatic brain injury (TBI), also called acquired brain injury or simply head injury, occurs when a sudden trauma causes damage to the brain. TBI can result when the head suddenly and violently hits an object, or when an object pierces the skull and enters brain tissue. Symptoms of a TBI can be mild, moderate, or severe, depending on the extent of the damage to the brain. A person with a mild TBI may remain conscious or may experience a loss of consciousness for a few seconds or minutes. Other symptoms of mild TBI include headache, confusion, lightheadedness, dizziness, blurred vision or tired eyes, ringing in the ears, bad taste in the mouth, fatigue

or lethargy, a change in sleep patterns, behavioral or mood changes, and trouble with memory, concentration, attention, or thinking. A person with a moderate or severe TBI may show these same symptoms, but may also have a headache that gets worse or does not go away, repeated vomiting or nausea, convulsions or seizures, an inability to awaken from sleep, dilation of one or both pupils of the eyes, slurred speech, weakness or numbness in the extremities, loss of coordination, and increased confusion, restlessness, or agitation.”¹

Brain injuries are classified into three categories: mild, moderate or severe. A brain injury sustained in any of these three categories can temporarily or permanently impair a person’s cognitive skill and interfere with their emotional well-being, as well as physical abilities. The aforementioned brain injury categories can be somewhat misleading. It is important to fully explain your client’s injuries to the jury. A “mild” brain injury can severely impact a person’s ability to function due to subsequent memory or concentration problems. A jury might misinterpret or be dismissive of a “mild brain injury,” but these individuals have significant sequella that should be fully elucidated. Moreover, a mild brain injury in a person with a cognitively demanding career, e.g. an air traffic controller, may be completely disabled from performing his or her job. Moderate or severe brain injuries are more devastating than mild brain injuries. The Mayo Clinic provides helpful information regarding the symptoms of each classification²:

The signs and symptoms of a mild brain injury may include:

- A brief period of unconsciousness

¹ “NINDS Traumatic Brain Injury Information Page,”
<<http://www.ninds.nih.gov/disorders/tbi/tbi.htm>>, accessed on February 24, 2009.

² “Traumatic Brain Injury,”
<<http://www.mayoclinic.com/health/traumatic-brain-injury/DS00552/DSECTION=symptoms>>,
accessed on February 24, 2009.

- Amnesia for events immediately before and after the injury
- Headache
- Confusion
- Dizziness or loss of balance
- Sensory problems, such as blurred vision, ringing in the ears (tinnitus) or a bad taste in the mouth
- Mood changes
- Memory or concentration problems

The signs and symptoms of moderate to severe traumatic brain injury include:

- Persistent headache
- Repeated vomiting or nausea
- Convulsions or seizures
- Inability to awaken from sleep
- Dilatation of one or both pupils of the eyes
- Slurred speech
- Weakness or numbness in the extremities
- Loss of coordination
- Profound confusion
- Agitation, Combativeness

Medical providers initially assess brain injury severity by the Glasgow Coma Scale (GCS). (See Attachment "A"). The best score of a GCS is 15 and usually predicts a normal outcome. There is no loss of consciousness and no post-traumatic amnesia with a GCS of 15. A GCS of 13-15 indicates a mild brain injury, with a loss of consciousness and/or post-traumatic amnesia present. A GCS of 9-12 indicates a moderate brain injury with a loss of consciousness and post-traumatic amnesia. With a GCS of 3-8, a patient will also have a loss of consciousness as well as post-traumatic amnesia, but the injury is severe.

Another type of assessment tool used to measure the levels of awareness and cognition, behavior and interaction with the environment is the Rancho Los Amigos Scale. (See Attachment "B"). This assessment is typically used after the initial injury, when the GCS is most informative.

Besides the obvious physical impairments, one of the most significant impairment

brain injury survivors struggle with is one of diminished capacity in their executive functioning. Executive functioning consists of those capabilities that enable a person to engage successfully in independent, purposeful, and self-serving behavior. It comprises mental functions critical for self-awareness, goal setting, planning, initiating, inhibiting, self-monitoring and evaluation, problem solving, strategic thinking as well as flexible thinking. When executive functions are impaired, the individual may no longer be capable of self-care or performing useful work independently or maintaining normal social relationships, regardless of how well-preserved the cognitive capabilities are, or how high the persons scores on tests of skills, knowledge and abilities.

Any impairment a brain injury survivor suffers from can have a severe impact on their emotional state. Brain injury survivors are more susceptible to depression, anxiety, irritability, anger, frustration, anhedonia (lack of ability to perceive pleasure), and paranoia. The percentage of brain injury survivors who suffer from a major depressive disorder is 27-50%. Depression often leads to social isolation as well as an increase in drug and alcohol consumption. It is important to stay in regular contact with the care-giver to monitor your clients well-being and stay current with their medical and psychological issues.

Along with these life-altering emotional changes, brain injury survivors experience significant behavioral changes. These changes can include: confusion, agitation, aggression, poor ability to manage anger, sexual inappropriateness, poor safety awareness and impulsivity. In fact, some brain injury survivors have such behavior dysfunction that they are difficult or impossible to manage in a home, hospital or community setting. There are few neurobehavioral facilities which offer secure settings and structured activities for

these types of patients/clients.

Hopefully, the general information provided has given you a greater appreciation for the hardships survivors and their families suffer. This information should be a starting point for your own investigation into the specific deficits and hardships your client may be suffering. Your full understanding of these impairments will allow you to effectively convey this information to the jury in a way they can understand, appreciate and acknowledge.

As you are aware, it can be difficult explaining and holding the attention of a jury long enough to explain the mechanics of the brain injury, much less the cognitive, emotional and behavior impairments associated with brain injury. Complex medical data and other evidence takes most of us the length of time of initial client consultation to the time of trial to fully understand and appreciate. At trial, it is our job to creatively and concisely convey this information to a jury in a few days. It is a daunting task and your brain injured client and their family are counting on you for a positive outcome. So how do you go about proving the damages in your brain injured client's case?

Realizing the jury will only absorb so much in details, it is important to explain the damages in a way that any lay person can understand with ease. Some methods to prove damages in a brain injured case are as follows: (1) lay witness testimony; (2) demonstrative evidence in the form of various imaging studies, "day-in-the-life" videos and photographs; (3) utilization of neuropsychologist testimony; and (4) testimony from a life care planner. Lay witness testimony can be the most important witness testimony at trial. This testimony has the potential to elicit the most empathetic response from the jury. Demonstrative evidence in the form of various MRIs, fMRIs, SPECT and PET scans, CT scans, EEG's and DTI scans will require a physician, most often a neurologist or neuroradiologist, to interpret

for the jury. "Day-in-the-life" videos and photographs are both educational and empathy provoking. The quote "a picture is worth a thousand words" was never more applicable than in proving damages in a brain injury case. Neuropsychologists offer testimony regarding the brain injury survivors brain function, as well as emotional and behavioral issues your client may be experiencing. Last but not least, life care plans can provide the jury with an understanding of the comprehensive plan necessary to care for and rehabilitate your brain injured client.

As previously stated, lay witnesses can be the most important testimony presented at trial. Witness testimony from family, friends, co-workers, and employers serve as a necessary foundation of proof in a brain injury case. The reason their testimony is so important is because it offers the best "before and after" description of the brain injury survivor's physical, cognitive, emotional and behavioral deficits. Lay witnesses will tell the story of the survivor's suffering in a way that jurors can relate to and understand, as opposed to the technical jargon experts use throughout the trial. While technical aspects of the medicine may be obtained and explained by an expert, a jury may still be skeptical, when they are unable to see a physical injury or visible proof such as an x-ray, MRI or CT scan results. Sometimes, in the brief time the jury is able to see the brain injury survivor, they may seem quite normal. Lay witnesses provide validation of the injury. They also remove the case from the realm of complicated medical terms and set forth simple examples of what the injury is doing to the plaintiff on a day-to-day basis. The lay witness also offers simple anecdotal testimony regarding the plaintiff that the jurors can easily understand. Frequently, the people who know an injured person best: spouse, children, family members, co-workers, teacher are best able to illustrate the extent of brain injury

anecdotally. Trying brain injury cases successfully requires a balance between expert witnesses and lay witnesses.

Fact lay witnesses compare and contrast the personality, functional and cognitive, changes while the expert witnesses can explain by imaging studies and neuropsychological test results why these changes have occurred. Present and former employers, co-workers and teachers can demonstrate changes in work ethic, speed of accomplishment, customer relations, personality, patience, and practical skills. With proper lay witness testimony, the jury learns the extent of the personality change after the time the injury occurred. Casual acquaintances can be powerful and credible witnesses, because they often-times have little connection to the plaintiff or the case and are not subject to being accused of bias. A basic direct examination might include questions relating to the before the injury status of the plaintiff as follows³:

- Tell us how you know the plaintiff and describe your times together?
- Describe the plaintiff's physical appearance, family lifestyle, emotional status *before* the injury.
- Describe the plaintiff's physical appearance, family lifestyle, emotional status *after* the injury.
- Have you watched the plaintiff in various circumstances including physical activities, mental activities, work activities? Tell us about it.
- Prior to the injury what kind of person was the plaintiff?
- How was his attitude, willingness, energy level, leadership qualities, ability to get along with others on the job, with the family, at church, in civic activities, in hobbies, at sports?
- How was his or her general health?

³ From lecture by Pete Law, Esquire

- How was his attitude, willingness, energy level, leadership qualities, ability to get along with others on the job, with the family, at church, in civic activities, in hobbies, at sports?
- How was his or her general health?

Demonstrative evidence can be helpful in brain injury litigation in a number of ways. It is of most use in clarifying injuries evidenced in various imaging studies such as MRI's and CT's in order to assist jurors, in understanding and appreciating the injuries the patient has sustained and to help correlate the injuries and neuro-cognitive deficits directly with the injury.

The gold standard imaging tests for brain injury have been Magnetic Resonance Imaging, MRI and CT scanning. More sophisticated tests have included SPECT and PET scanning. New types of scanning, fMRI or Functional Magnetic Resonance Imaging along with DTI are powerful new tools which can be utilized to demonstrate a plaintiff's injuries. As many of you know, magnetic imaging uses a powerful magnetic field, radio frequency pulses, and computer to produce detailed pictures of organs, soft tissues, bone and virtually all other internal body structures including the brain. The images can then be examined on a computer monitor, printed or copied to CD. MRI does not use ionizing radiation (x-rays). The MRI uses a contrast material called gadolinium, which does not contain iodine.

Functional Magnetic Resonance Imaging, fMRI, is a relatively new procedure that uses magnetic resonance imaging to measure the tiny metabolic changes that take place in an active part of the brain. FMRI is becoming the diagnostic method of choice for learning how a normal, diseased or injured brain is working or malfunctioning, as well as for assessing the potential risk of surgery or other invasive treatment of the brain.

Physicians perform fMRI to: (1) examine the anatomy of the brain; (2) determine precisely which part of the brain is handling critical functions such as thought, speech, movement and sensation, which is called brain mapping; (3) help assess the effects of stroke, trauma or degenerative disease such as Alzheimer's on brain function; (4) monitor the growth and function of brain tumors; (5) guide the planning of surgery, radiation therapy or other surgical treatments of the brain.

During the fMRI, the patient will perform a particular task during the imaging process causing increased metabolic activity in the area of the brain responsible for the task. This activity, which includes expanding blood vessels, chemical changes, and the delivery of extra oxygen can then be recorded on MRI images. The patient's head may be placed in a brace designed to help hold it still. This brace may include a mask which was specially created for each patient. The patient is then given special goggles and/or earphones to wear so that audio-visual stimuli (for example, a projection from a computer screen or recorded sounds) may be administered during the scan. The patient is also asked to perform a number of small tasks such as tapping the thumb against each of the fingers on the same hand, rubbing a block of sandpaper or answering simple questions. The examination takes approximately 45 minutes. (MR spectroscopy, which provides additional information on the chemicals present in the body's cells, may also be performed during the fMRI exam). FMRI enables the detection of abnormalities of the brain as well as the assessment of the normal functional anatomy of the brain, which can not be accomplished with other imaging techniques. Thus, fMRI opens a new ability to directly observe brain function. This test is based on an increase in blood flow to the local vasculature that accompanies neural activity in the brain.

Before the development of fMRI, functional neuro-imaging was typically performed with Positron Emission Tomography, PET scans, or more rarely with SPECT scans. Positron Emission Tomography, PET, is a nuclear medicine imaging technique which produces a three dimensional image or map of functional processes in the body. The system detects pairs of gamma rays emitted indirectly by a positron emitting radio nucleide tracer which is introduced into the body on a biologically acted molecule. Images of tracer concentration in three dimensional space are then reconstructed by computer analysis. The CT scan or Magnetic Resonance Imaging scans are better at showing anatomic information, while the PET scan is better at showing metabolic information about how the brain metabolizes sugar. SPECT scanning or Single Photon Emission Computed Tomography, is a nuclear medicine thermographic imaging technique using gamma rays. It can provide true 3-D information. SPECT can be used to compliment any gamma imaging study where a true 3-D representation can be helpful e.g., tumor imaging, infection imaging, thyroid imaging or bone imaging. SPECT can assess brain metabolism regionally in an attempt to diagnose and differentiate the different causal pathologies of dementia.

The capabilities of today's imaging specialists using SPECT scanning, PET scanning, MRI and fMRI as well as CT combined with lay testimony can provide the proof required by even the most skeptical juror. Catastrophic and severe brain injuries are perhaps the easiest to demonstrate, because such devastating injuries are typically evident in the imaging studies.

MRI may show changes or shifts in massive brain injuries but without the resolution, required to demonstrate the microscopic changes of cellular shearing. Neuro-radiologists may be required to explain the limits of the diagnostic testing and to prescribe and interpret

newly developed tests such as fMRI, PET, DTI and SPECT scans. Positron Emission Tomography, PET scans, can detect regions of dysfunction by identifying areas of decreased glucose metabolism.

Another relatively new technology is a DTI scan or Diffusion Tensor Imaging. DTI is a MRI technique that measures the diffusion characteristics of water molecules in brain tissues in order to produce neural tract images. The principal application is the imaging of white matter location and orientation of axons in parallel bundles and myelin sheaths which facilitate the diffusion of water molecules. DTI is used clinically in the tract-specific localization of white matter lesions, such as trauma, and in defining the severity of diffuse traumatic brain injury.

In some injuries, imaging studies such as CT scan and MRI are negative. In such cases, demonstrative evidence and lay testimony can be crucial. Usually, these behavioral and cognitive changes are testified to by lay witnesses such as friends, family, and spouses and a neuropsychologist. One of the more effective demonstrative aids for the less severe brain injury available today is the Mild TBI animation series developed by Medivisuals. These animation sequences very graphically communicate to the jury how injuries to the brain can occur that result in neuro-cognitive deficits.

In severe brain injuries, because of advances in animation, animation demonstrating injuries and surgeries are available and affordable. *ScanSelector™*, is an effective way to help those involved to understand the exact location and orientation of a scan, while retaining the attention of the juror. With the *ScanSelector™* presentation, the scan glides out of the orientation view allowing the viewer to appreciate the exact level of the scans as well as how it is oriented. A *ScanSelector™* presentation can be viewed at the following

link: <http://www.medivisuals.com/content/animations/ctss.html>

Sometimes a brain injury results in the disruption of neural pathways and these can also be viewed at the Medivisual's website. The neural pathways animation sequences demonstrate the general pathways that impulses must travel in order to perform certain functions such as repeating a written or heard word, maintaining balance, eye and motor control, hearing, vision, memory, etc. The purpose of the animations is to help correlate neurological deficits with a traumatic event by helping experts explain how disruption of axons, neurons, and dendrites anywhere along these pathways can result in interference with the injured person's ability to effectively perform cognitive tasks. In addition, diffuse axonal injury, which may not show up on CT or MRI, can result in brain dysfunction.

Explaining brain function is a critical part of the evidence which must be presented in a traumatic brain injury case. The lawyer must explain brain function by correlating the areas of the brain that control various functions with the areas of deficits demonstrated in the plaintiff. There are various brain function charts available that demonstrate functional control. In demonstrating functional control, the plaintiff's lawyer should select the best possible charts to emphasize these deficits.

Various types of surgeries can be required because of brain injury. Demonstrative aids demonstrating the invasive, life threatening surgical procedures necessary to address intracranial injuries can prove quite impressive for juries. Demonstrative aids can prove persuasive in matters such as placement of intracranial pressure monitors, ventriculostomy tubes, craniotomies and/or craniectomies. Even with all the new available technologies, traditional exhibit boards created by a medical illustrator or stock boards sold by such companies as the DOE Report (www.doerport.com) are effective. These exhibit boards can

be left in place in the sight of the jury while the expert testifies and are not subject to electronic snafus.

One essential use of videos and photographs is to help demonstrate the severity of the injury. You can effectively use video and photographs of the patient taken in the hospital to show the plaintiff's state immediately after the injury and contrast it to the plaintiff's appearance at trial. You may also use video of any treatment performed, including the use of ventilators or other invasive medical devices to demonstrate the severity of the injury. Critical photographs should be enlarged and reproduced into several copies, so that the witnesses can mark on them, if necessary. Day-in-the-life videos can be enormously effective in showing the consequences of a brain injury. These videos generally consist of short (5-15 minutes) video footage of the plaintiff, usually in his or her home environment, in the performance of the daily activities including: eating, bathing, grooming, getting dressed and going to different appointments such as therapy or activities. In appropriate cases, the video can also include footage of the plaintiff at work, which can be combined with co-worker or supervisor testimony about the plaintiff's pre-trauma work capabilities, job performance evaluations, etc. These videos can be extremely compelling, but it is important to make them tasteful and objective to avoid any claims that they should be excluded as unduly prejudicial.

It is a challenge for the plaintiff's lawyer to go through the various areas of neuropsychological testing with the neuropsychologist and make it interesting and understandable for the jury. The neuropsychologist, while testifying, can summarize the various abnormal test results and contrast and compare them to the various normal or normative test results. He or she can then relate to the jury the effect of these deficits on

the day to day functioning of the client.

As most of you probably know, neuropsychology is the applied scientific discipline that studies the structure and function of the brain related to cognitive functioning and overt behaviors. Neuropsychology is scientific in its approach and shares the subject of information processing of the mind with cognitive psychology and cognitive science. In practice, neuropsychologists tend to work in academia (involved in basic or clinical research) or in clinical settings (involved in assessing or treating patients with neuropsychological problems). Clinical neuropsychology is the application of neuropsychological knowledge to the assessment, management and rehabilitation of people who have suffered illness or injury to the brain which has caused neuro-cognitive problems.

One aspect of neuropsychological testing is functional localization. This is based on the principal that if a specific type of problem can be found after an injury to a specific area of the brain, it is probable that this part of the brain is in some way involved. Neuropsychology may be used in conjunction with functional neuro-imaging, which uses neuro-imaging technologies to take readings from the brain, usually when a person is doing a particular task, in an attempt to understand how the activation of particular brain areas is related to the task.

Most neuropsychological tests in current use are based on traditional psychometric theory. In this model, a person's raw score on a test is compared to a large general population normative sample, that should ideally be drawn from a comparable population to the person being examined. Normative studies frequently provide data stratified by age, level of education, and/or ethnicity. Where such factors have been shown by research to effect performance on a particular task, this allows for a person's performance to be

compared to a suitable control group, and thus provide a fair assessment of his or her current cognitive functioning.

The objectives of neuropsychological testing are to document post-injury functioning: neuro-cognitive, behavioral, emotional, to assist in treatment planning, to monitor recovery and outcome and to assist in decision making. Obtaining a history is important. The neuropsychologist should document injury history, post-injury history, pre-morbid history including developmental, neurological, psychiatric, educational and occupational. This should include prior drug use or problems with criminal activity.

Technical concerns for neuropsychologists include using incorrect tests, using outdated tests, using tests with poor norms, using tests not validated in TBI, administering tests improperly, scoring tests improperly, failing to report standard scores, and the use of interpreters for non-English speakers.

In order to make these various tests useful in court, some assessment of the clients pre-morbid functional level must be included. Standardized testing such as the I.Q. Test and the Iowa Tests are conducted in elementary schools and these records are easily obtainable and already offer a comparison to other students of that age. For older clients, SAT scores as well as college, vocational school and graduate school records and grades can be useful along with records of employment or military services. It is essential that the neuropsychological evaluation include the change as to the cognitive functioning due to the injury, in order to establish damages properly. Be sure to have your neuropsychologist explain what these various test do, how they work and what they demonstrate in layman's terms. Neuropsychological jargon will not prove to be effective communication. The biggest challenge for presenting neuropsychological testimony is to make the testimony both

understandable and interesting.

The cumulative effect of various deficits must also be explained in terms of the overall functioning of the plaintiff. Often times these neuropsychological work-ups take two days to perform and to go through each test with the jury and the results can be tedious and beyond the attention span of the jury. Neuropsychological test results can be summarized in a chart which can be more readily understood and read by a jury. Neuropsychological assessment following traumatic brain injury is frequently the sine qua non for recovering a plaintiff's verdict. The goal of the neuropsychologist is to document post-injury functioning including neuro-cognitive, behavioral and emotional.

The cumulative effect of the brain injury survivor's deficits should also be explored by a life care planner who examines the needs of the brain injury survivor for optimal independence and who can enlist services to assist survivors to reach their greatest potential. The development of a comprehensive life care plan is a critical part of the rehabilitative process. The testimony of the life care planner is very important in proving damages in your brain injury case. The concept of rehabilitation and life care plans has been utilized in a variety of health care and legal settings to provide information and documentation regarding the cost of services relating to long term care.⁴ Counsel should hire a properly certified life care planner who can meet a Daubert challenge. The life care planner should be an individual who has professional credentials including: membership within a professional healthcare discipline or rehabilitation discipline, a current professional licensure or national board certification within a professional healthcare

⁴ LuRae Ahrendt, RN, CRRN, CCM; Life Care Planning for the Person with a Brain Injury, March 31, 2008.

discipline, completion of an accredited program in nursing with a baccalaureate or higher level of education in a professional healthcare or rehabilitation discipline, continuing education to ensure licensure or certification and knowledge of professional legal requirements. The life care planner should have an understanding of human anatomy and physiology, pathology, the health care system, the role and function of the health care system, and clinical practice guidelines or standards.

The life care plan should be a working document which provides information which can be utilized by the client and interested parties. It should be a collaborative effort among the various parties and reflect goals that are preventative and rehabilitative in nature. The life care planner should collaborate with other treating professionals, determine replacement frequency for appropriate care items and delineate options of cost for each aspect of care. A typical life care plan includes the following: projected evaluations, projected therapeutic modalities, diagnostic testing/educational assessment, wheelchair needs, wheelchair accessories and maintenance, aids for independent functioning and living, orthotics/prosthetics, home furnishings and accessories, modifications needed to make the home handicap accessible, drug/supply needs, home care/facility care, future medical care routine, transportation, health and strength maintenance, architectural renovations, potential complications, future medical care/surgical intervention or aggressive treatment or orthopaedic equipment needs and vocational/educational planning. In addition, the survivor's primary care physician should read and approve of the content of the life care plan.

Most importantly, be sure to have the life care planner explain to the jury why each element of the life care plan is critical to the plaintiff's well-being and chances for an

optimal recovery. With the institution caps on non-economic damages, the life care plan is critically important in obtaining special damages in a catastrophic injury case. Counsel should have the life care planner explain what the negative effect the jury's decision to omit each element of the life care plan would have on the plaintiff's health, well-being and recovery.

Enlargements of the pages from the life care plan, as well as the economist's calculations are useful demonstrative aids to assist the jury in digesting the dense and technical elements as the life care planner testifies. Frequently, jurors take notes memorializing the type and cost of each element of the life care plan. Photographs or examples of equipment should be used by the life care planner to show the jury the purpose of such devices.

As it is with any case, proving damages in a brain injury case can seem daunting. How does one explain the complex medical information to a jury in a few days or less? How do you hold the jury's attention long enough to explain the mechanics of the brain injury, the cognitive impairments, the emotional impairments, the physical impairments as well as the behavioral impairments? Hopefully, the basic elements described above will assist you in this endeavor.

Attachment "A"

Glascow Coma Scale (GCS)

| | | |
|-----------------------------|-------------------------------------------------|----------|
| Eye Opening Response | Spontaneous eye opening | 4 Points |
| | Opens to speech | 3 Points |
| | Opens to pain | 2 Points |
| | None | 1 Point |
| Verbal Response | Alert and Oriented | 5 Points |
| | Confused conversation, but coherent speech | 4 Points |
| | Inappropriate responses, words discernable | 3 Points |
| | Incomprehensible speech or sounds | 2 Points |
| | None | 1 Point |
| Motor Response | Obeys commands for movement | 6 Points |
| | Purposeful movement to painful stimulus | 5 Points |
| | Withdraws from pain | 4 Points |
| | Abnormal (spastic) flexion, decorticate posture | 3 Points |
| | Extensor (rigid) response, decerebrate posture | 2 Points |
| | No response | 1 Point |

- No Injury (GCS = 15/no loss of consciousness/no post-traumatic amnesia)
- Mild (GCS = 13-15/loss of consciousness and/or post-traumatic amnesia/ lesion)
- Moderate (GCS = 9-12/loss of consciousness/post-traumatic amnesia/lesion typical)
- Severe (GCS = 3 - 8/loss of consciousness/post-traumatic amnesia/lesion common)

Attachment "B"

**RANCHO LOS AMIGOS
LEVEL OF COGNITIVE FUNCTIONING SCALE**

- Level I - No response: Total Assistance
- Level II - Generalized Response: Total Assistance
- Level III - Localized Response: Total Assistance
- Level IV - Confused/Agitated: Maximal Assistance
- Level V - Confused, Inappropriate Non-Agitated: Maximal Assistance
- Level VI - Confused, Appropriate: Moderate Assistance
- Level VII - Automatic, Appropriate: Minimal Assistance for Daily Living Skills
- Level VIII - Purposeful, Appropriate: Stand-By Assistance
- Level IX - Purposeful, Appropriate: Stand-By Assistance on Request
- Level X - Purposeful, Appropriate: Modified Independent

Levels of Cognitive Functioning

Level I - No Response: Total Assistance

- Complete absence of observable change in behavior when presented visual, auditory, tactile, proprioceptive, vestibular or painful stimuli.

Level II - Generalized Response: Total Assistance

- Demonstrates generalized reflex response to painful stimuli.
- Responds to repeated auditory stimuli with increased or decreased activity.
- Responds to external stimuli with physiological changes generalized, gross body movement and/or not purposeful vocalization.
- Responses noted above may be same regardless of type and location of stimulation.
- Responses may be significantly delayed.

Level III - Localized Response: Total Assistance

- Demonstrates withdrawal or vocalization to painful stimuli.
- Turns toward or away from auditory stimuli.
- Blinks when strong light crosses visual field.
- Follows moving object passed within visual field.
- Responds to discomfort by pulling tubes or restraints.
- Responds inconsistently to simple commands.
- Responses directly related to type of stimulus.
- May respond to some persons (especially family and friends) but not to others.

Level IV - Confused/Agitated: Maximal Assistance

- Alert and in heightened state of activity.
- Purposeful attempts to remove restraints or tubes or crawl out of bed.
- May perform motor activities such as sitting, reaching and walking but without any apparent purpose or upon another's request.
- Very brief and usually non-purposeful moments of sustained alternatives and divided attention.
- Absent short-term memory.
- May cry out or scream out of proportion to stimulus even after its removal.
- May exhibit aggressive or flight behavior.
- Mood may swing from euphoric to hostile with no apparent relationship to environmental events.
- Unable to cooperate with treatment efforts.
- Verbalizations are frequently incoherent and/or inappropriate to activity or environment.

Level V - Confused, Inappropriate Non-Agitated: Maximal Assistance

- Alert, not agitated but may wander randomly or with a vague intention of going home.
- May become agitated in response to external stimulation, and/or lack of environmental structure.

- Not oriented to person, place or time.
- Frequent brief periods, non-purposeful sustained attention.
- Severely impaired recent memory, with confusion of past and present in reaction to ongoing activity.
- Absent goal directed, problem solving, self-monitoring behavior.
- Often demonstrates inappropriate use of objects without external direction.
- May be able to perform previously learned tasks when structured and cues provided.
- Unable to learn new information.
- Able to respond appropriately to simple commands fairly consistently with external structures and cues.
- Responses to simple commands without external structure are random and non-purposeful in relation to command.
- Able to converse on a social, automatic level for brief periods of time when provided external structure and cues.
- Verbalizations about present events become inappropriate and confabulatory when external structure and cues are not provided.

Level VI - Confused, Appropriate: Moderate Assistance

- Inconsistently oriented to person, time and place.
- Able to attend to highly familiar tasks in non-distracting environment for 30 minutes with moderate redirection.
- Remote memory has more depth and detail than recent memory.
- Vague recognition of some staff.
- Able to use assistive memory aide with maximum assistance.
- Emerging awareness of appropriate response to self, family and basic needs.
- Moderate assist to problem solve barriers to task completion.
- Supervised for old learning (e.g. self care).
- Shows carry over for relearned familiar tasks (e.g. self care).

- Maximum assistance for new learning with little or no carry over.
- Unaware of impairments, disabilities and safety risks.
- Consistently follows simple directions.
- Verbal expressions are appropriate in highly familiar and structured situations.

Level VII - Automatic, Appropriate: Minimal Assistance for Daily Living Skills

- Consistently oriented to person and place, within highly familiar environments. Moderate assistance for orientation to time.
- Able to attend to highly familiar tasks in a non-distraction environment for at least 30 minutes with minimal assist to complete tasks.
- Minimal supervision for new learning.
- Demonstrates carry over of new learning.
- Initiates and carries out steps to complete familiar personal and household routine but has shallow recall of what he/she has been doing.
- Able to monitor accuracy and completeness of each step in routine personal and household ADLs and modify plan with minimal assistance.
- Superficial awareness of his/her condition but unaware of specific impairments and disabilities and the limits they place on his/her ability to safely, accurately and completely carry out his/her household, community, work and leisure ADLs.
- Minimal supervision for safety in routine home and community activities.
- Unrealistic planning for the future.
- Unable to think about consequences of a decision or action.
- Overestimates abilities.
- Unaware of others' needs and feelings.
- Oppositional/uncooperative.
- Unable to recognize inappropriate social interaction behavior.

Level VIII - Purposeful, Appropriate: Stand-By Assistance

- Consistently oriented to person, place and time.
- Independently attends to and completes familiar tasks for 1 hour in distracting environments.
- Able to recall and integrate past and recent events.
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical information for later use with stand-by assistance.
- Initiates and carries out steps to complete familiar personal, household, community, work and leisure routines with stand-by assistance and can modify the plan when needed with minimal assistance.
- Requires no assistance once new tasks/activities are learned.
- Aware of and acknowledges impairments and disabilities when they interfere with task completion but requires stand-by assistance to take appropriate corrective action.
- Thinks about consequences of a decision or action with minimal assistance.
- Overestimates or underestimates abilities.
- Acknowledges others' needs and feelings and responds appropriately with minimal assistance.
- Depressed.
- Irritable.
- Low frustration tolerance/easily angered.
- Argumentative.
- Self-centered.
- Uncharacteristically dependent/independent.
- Able to recognize and acknowledge inappropriate social interaction behavior while it is occurring and takes corrective action with minimal assistance.

Level IX - Purposeful, Appropriate: Stand-By Assistance on Request

- Independently shifts back and forth between tasks and completes them accurately for at least two consecutive hours.
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical

information for later use with assistance when requested.

- Initiates and carries out steps to complete familiar personal, household, work and leisure tasks independently and unfamiliar personal, household, work and leisure tasks with assistance when requested.
- Aware of and acknowledges impairments and disabilities when they interfere with task completion and takes appropriate corrective action but requires stand-by assist to anticipate a problem before it occurs and take action to avoid it.
- Able to think about consequences of decisions or actions with assistance when requested.
- Accurately estimates abilities but requires stand-by assistance to adjust to task demands.
- Acknowledges others' needs and feelings and responds appropriately with stand-by assistance.
- Depression may continue.
- May be easily irritable.
- May have low frustration tolerance.
- Able to self monitor appropriateness of social interaction with stand-by assistance.

Level X - Purposeful, Appropriate: Modified Independent

- Able to handle multiple tasks simultaneously in all environments but may require periodic breaks.
- Able to independently procure, create and maintain own assistive memory devices.
- Independently initiates and carries out steps to complete familiar and unfamiliar personal, household, community, work and leisure tasks but may require more than usual amount of time and/or compensatory strategies to complete them.
- Anticipates impact of impairments and disabilities on ability to complete daily living tasks and takes action to avoid problems before they occur but may require more than usual amount of time and/or compensatory strategies.
- Able to independently think about consequences of decisions or actions but may require more than usual amount of time and/or comepensatory strategies to select the appropriate decision or action.
- Accurately estimates abilities and independently adjusts to task demands.

- Able to recognize the needs and feelings of others and automatically respond in appropriate manner.
- Periodic periods of depression may occur.
- Irritability and low frustration tolerance when sick, fatigued and/or under emotional stress.
- Social interaction behavior is consistently appropriate.

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