Service Delivery to Veterans with TBI: A Caregiver's Perspective

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24 July 2007

my day of infamy

My husband Sam, a Marine
Sergeant, was hit by a
roadside bomb in Iraq.

The phone call that changed my life

- I know that number.
- broken arm and leg
- unconscious
- my biggest concern

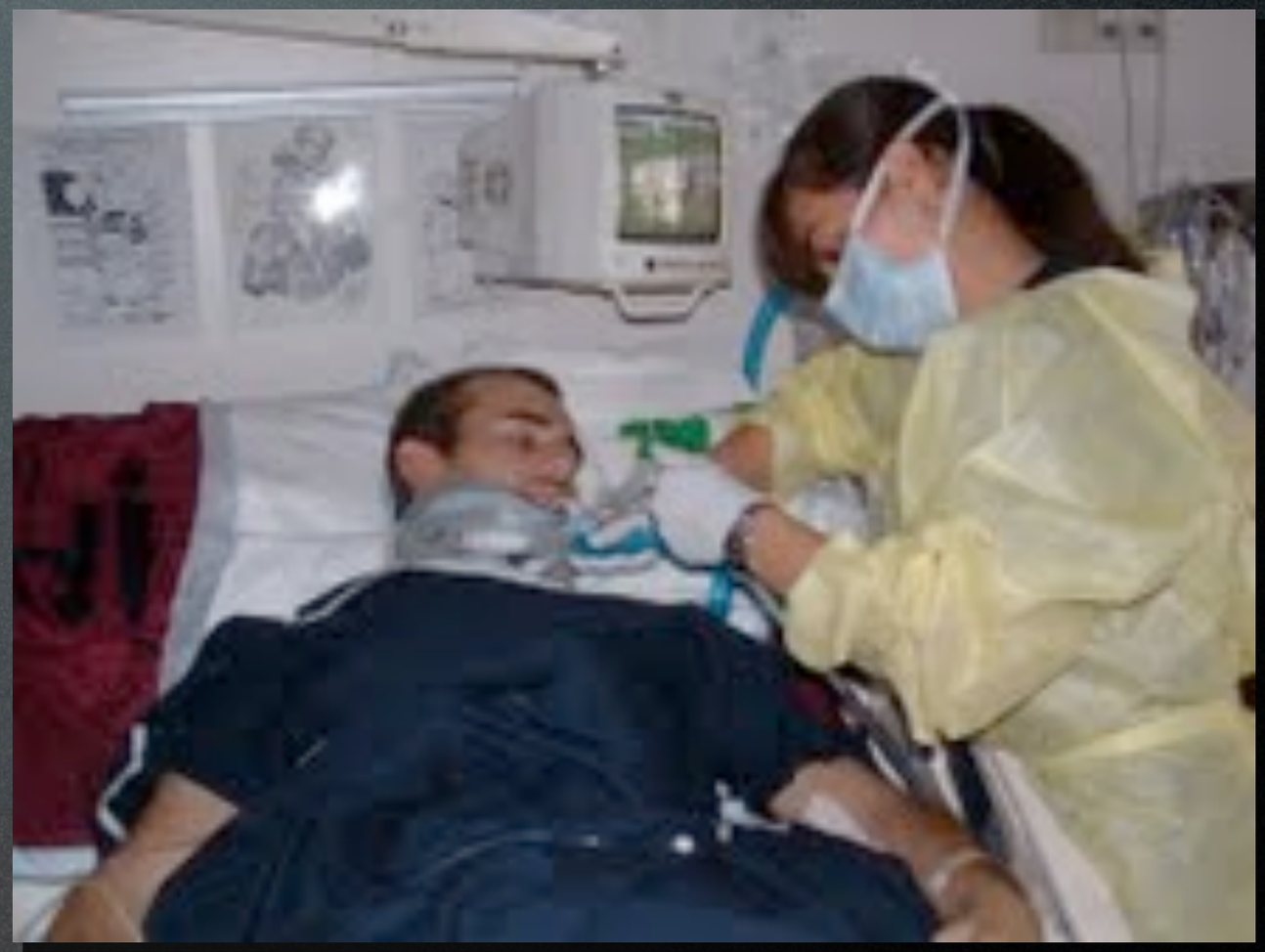
Medevac'd to Baghdad

The Journey Home

- Baghdad- 24 July 2007
- Kuwait
- Landstuhl, Germany
- Bethesda, Maryland- 28 July 2007

Injuries

- Broken neck
- Broken arm, 2 places
- 3 Broken ribs
- Collapsed lung
- Ruptured spleen
- 3 inches of fibula gone
- 1/2 calf gone
- large burns and lacerations to back, backside and hip.
- Traumatic brain Injury (TBI)

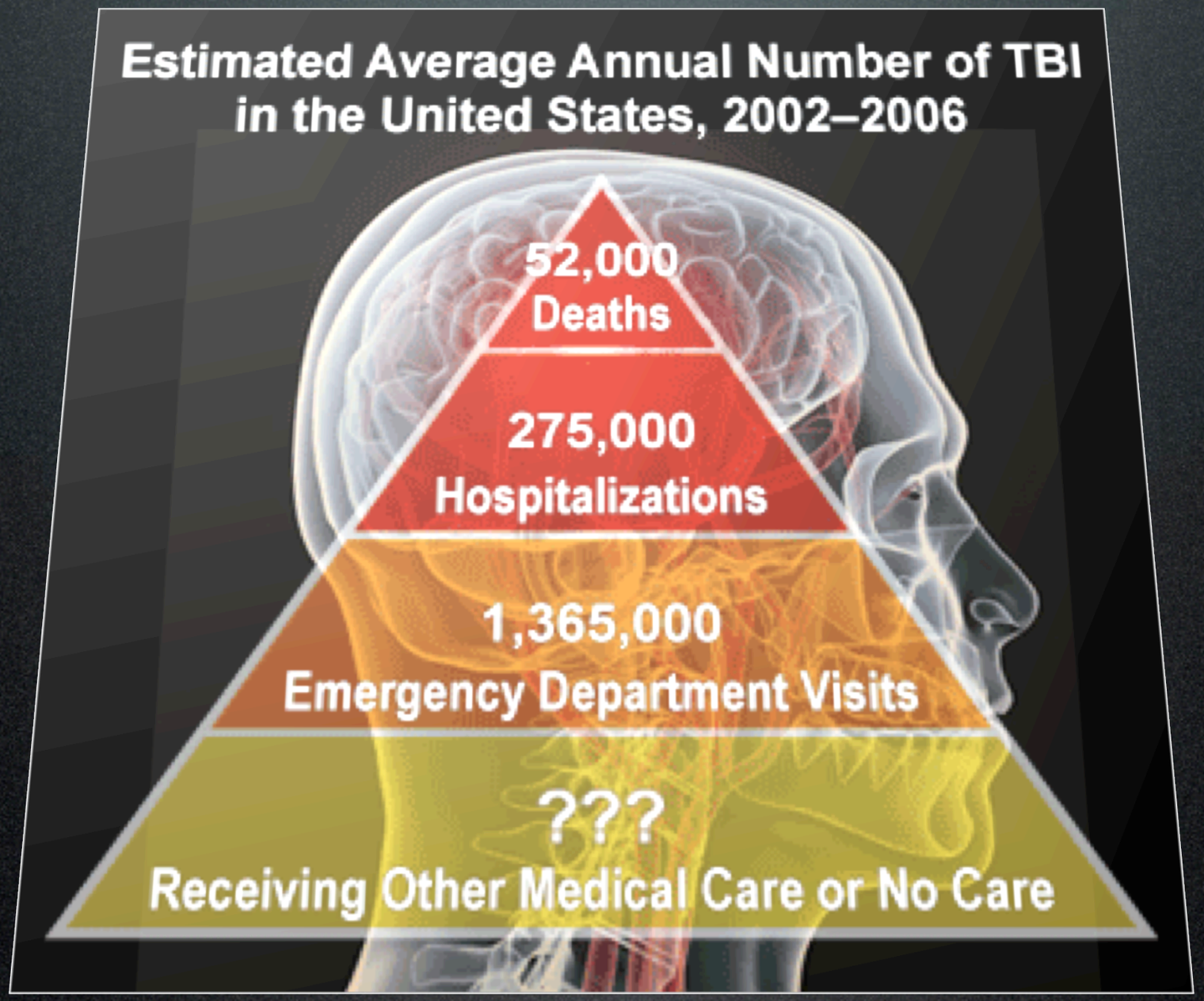


Traumatic Brain Injury

- An alteration in brain function, or other evidence of brain pathology, caused by an external force.
  - Information About Brain Pathology, 2011

TBI Statistics

- 1.7 million Americans suffer a TBI annually



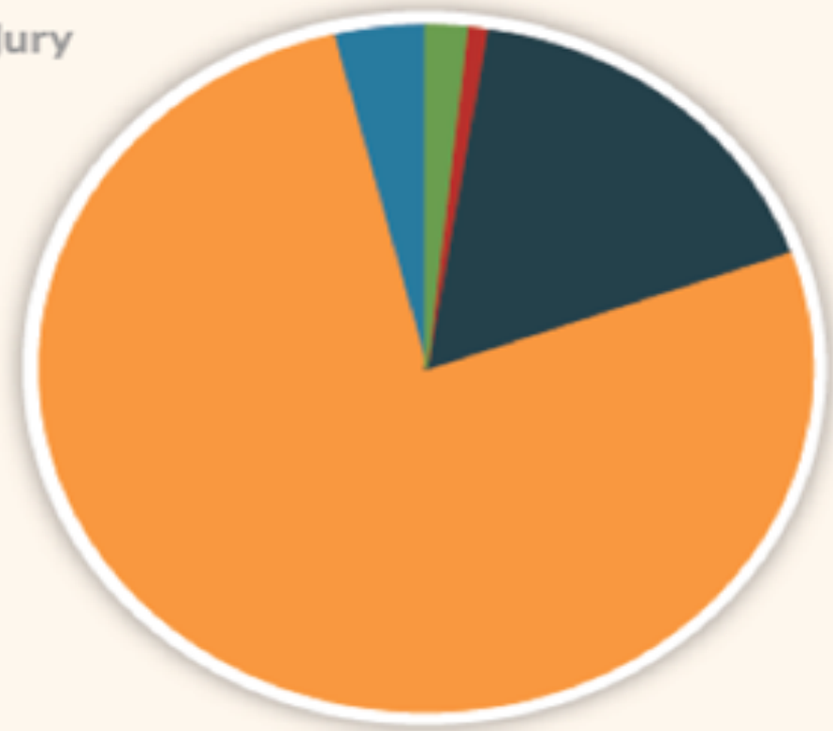
The Department of Defense reports 212,742 service members sustained TBI from 2000-2011

TBI Numbers By Severity – All Armed Forces

DoD Numbers for Traumatic Brain Injury

'00-'11 Q1 Totals

Penetrating	3,573
Severe	2,235
Moderate	35,661
Mild	163,181
Not Classifiable	8,092
Total - All Severities	212,742



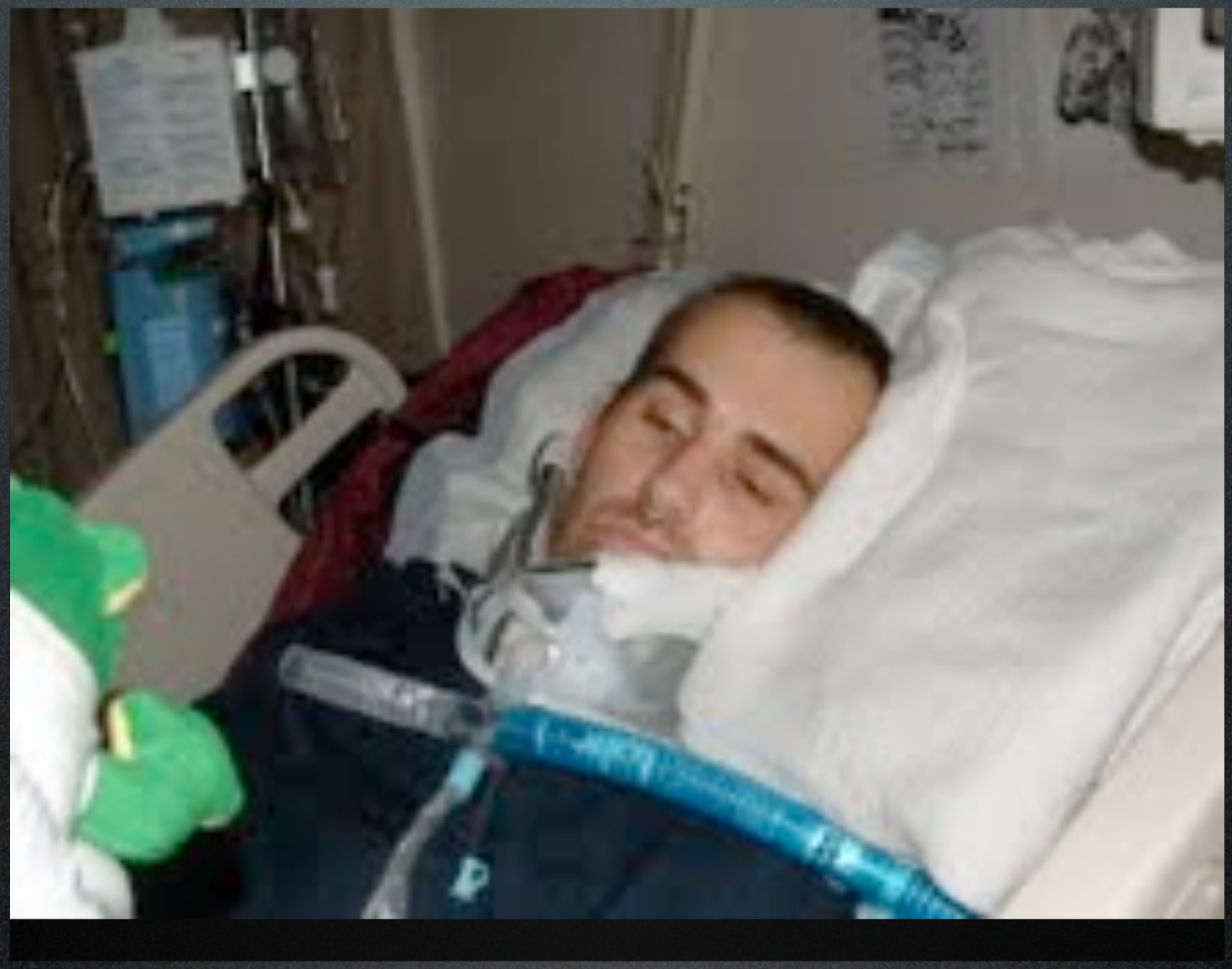
Source: Armed Forces Health Surveillance Center

Numbers for 2000 - 2011 Q1, as of 16 May 2011

http://www.dvbic.org/TBI-Numbers.aspx [dod.tbi-2000-2011Q1-as-of-110516.pdf]. Source: Defense Medical Surveillance System (DMSS) and Theater Medical Data Store (TMDS) Prepared by Armed Forces Health Surveillance Center (AFHSC). Accessed 10 Jul 2011.

Leading cause of war-zone related TBI is blast injury

Reality Check



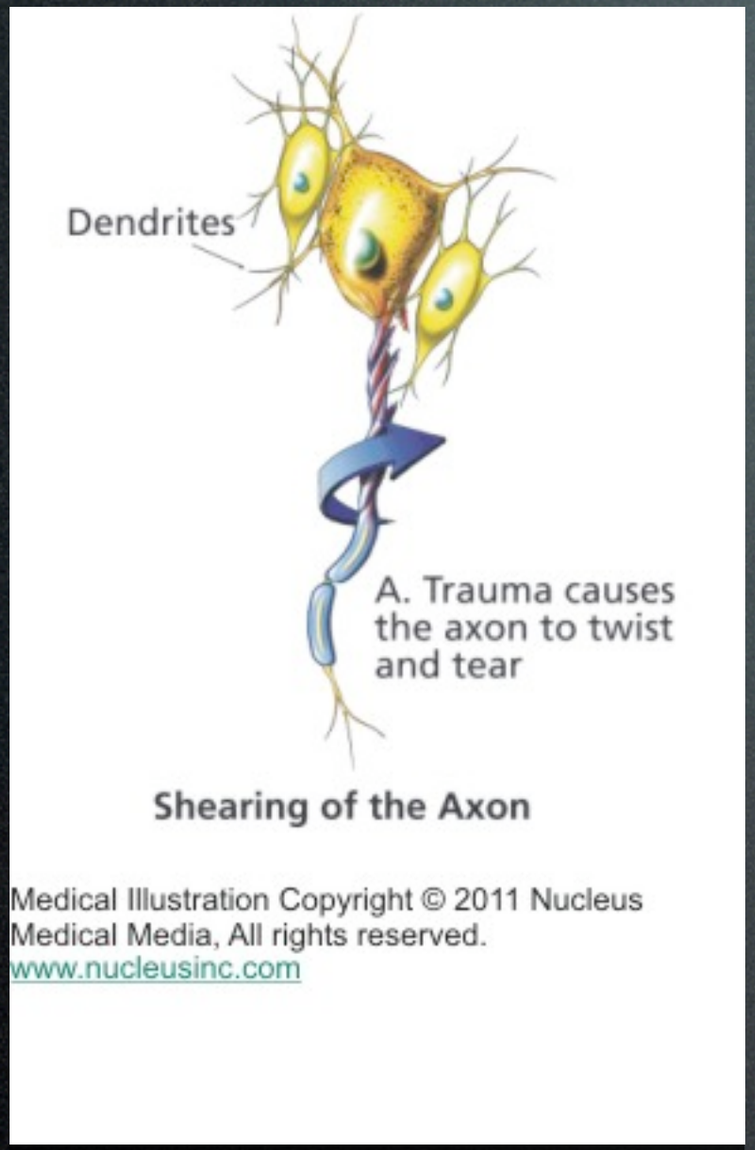
- “If he survives, he’ll be a vegetable.”

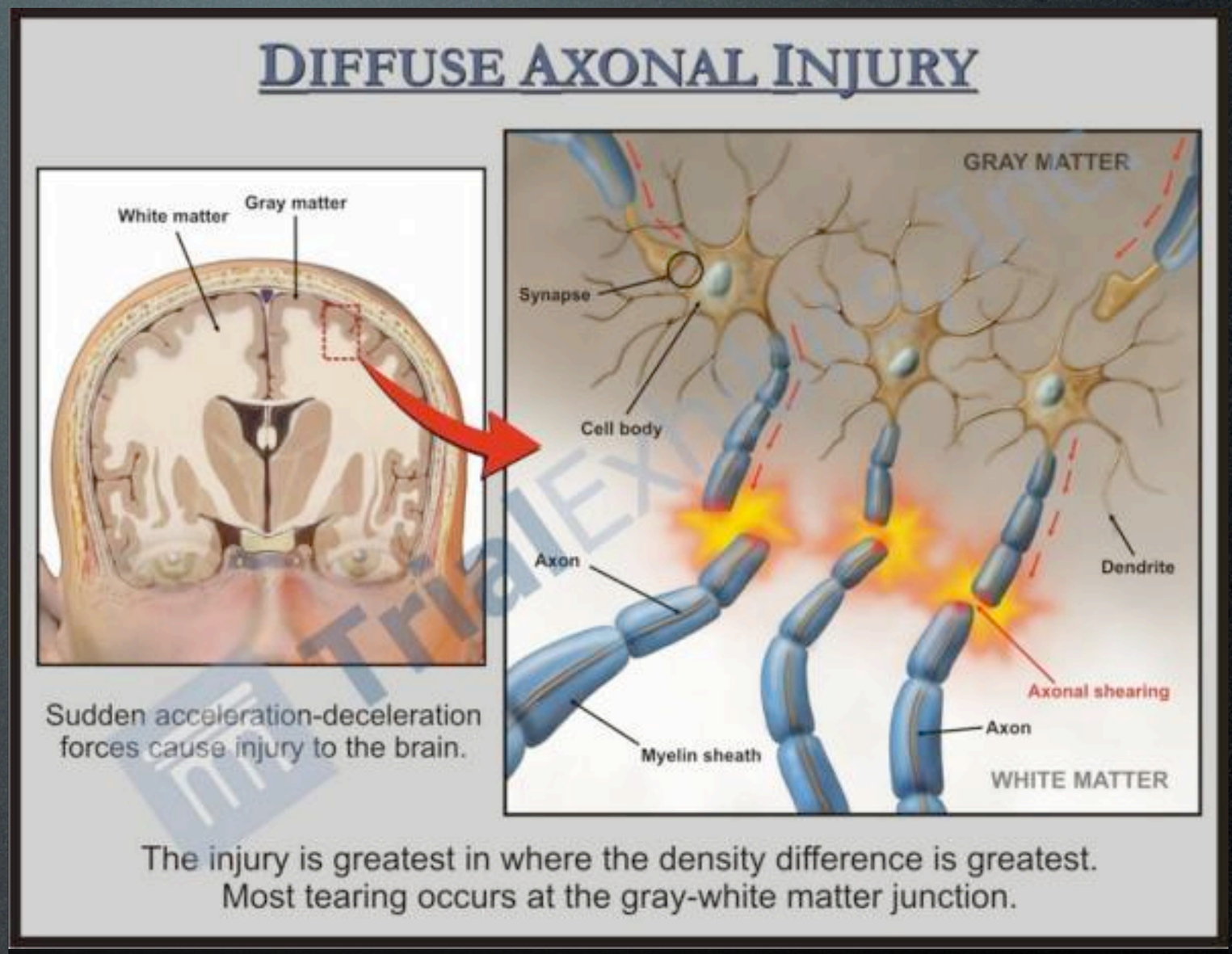
Sam's TBI

- Diffuse axonal injury
  - pinpoint areas of bleeding throughout brain.
  - not surgical
- Glasgow Coma Scale 3

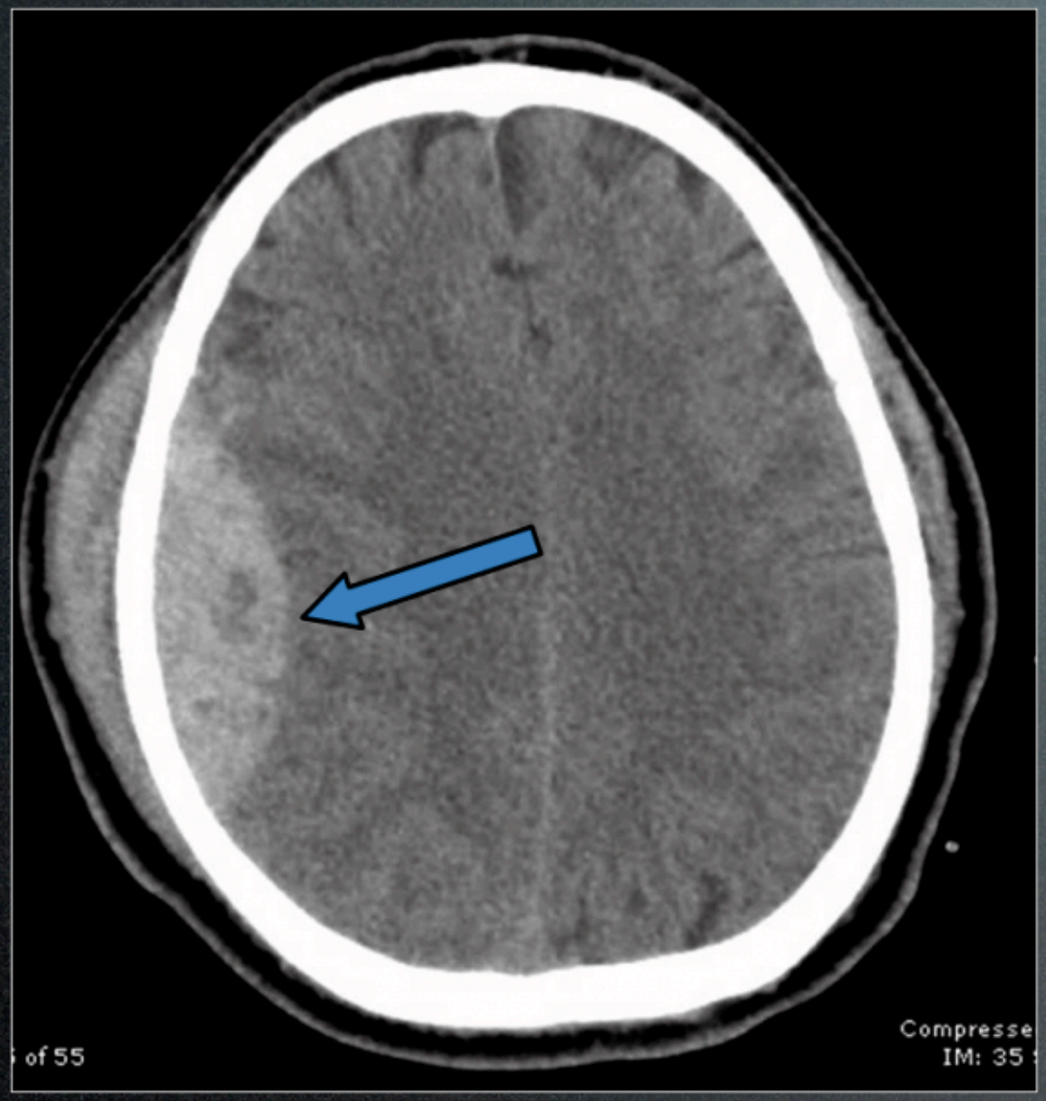
Glasgow Coma Scale

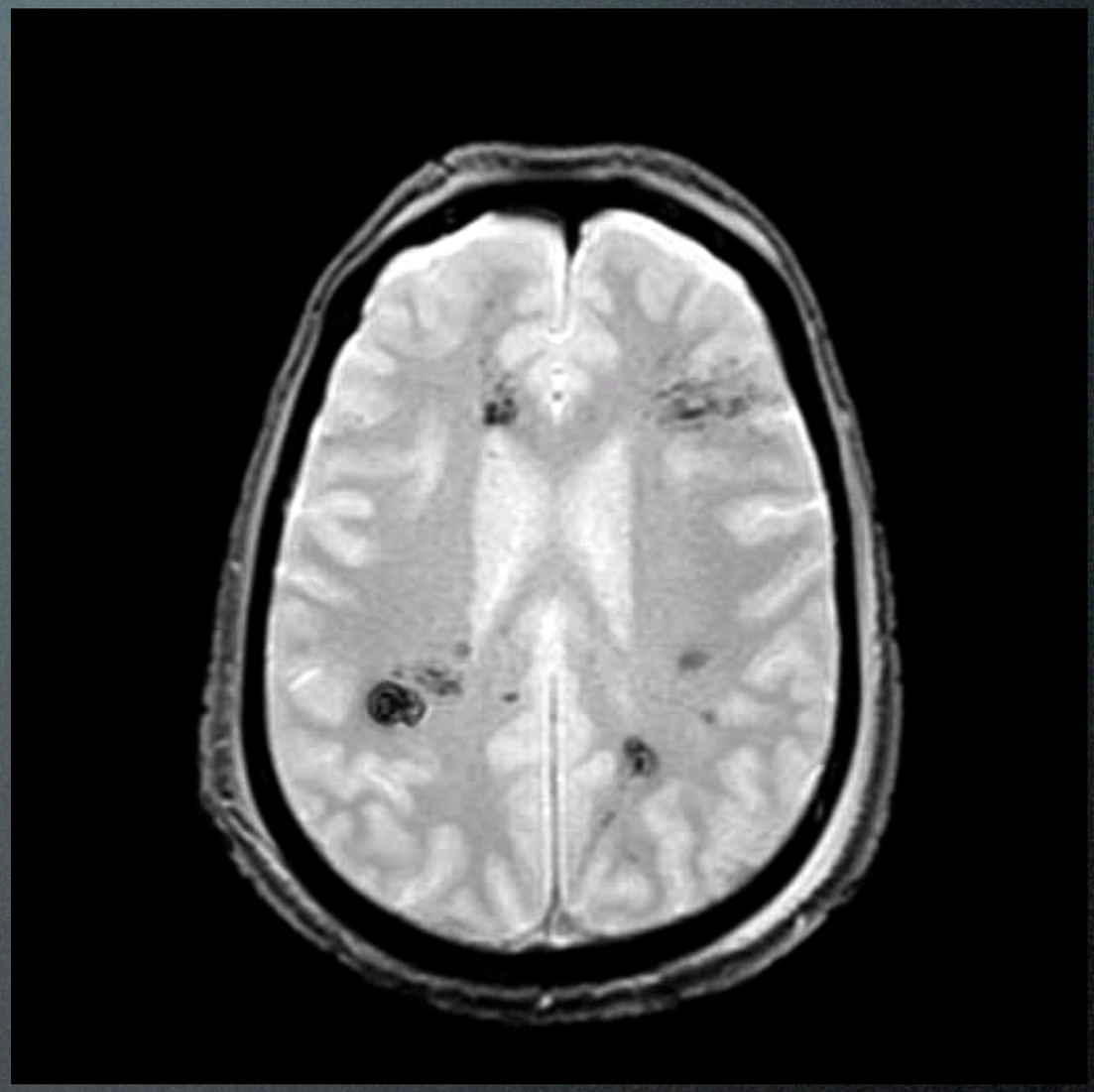
		Score
Eye opening	spontaneously	4
	to speech	3
	to pain	2
	none	1
Verbal response	orientated	5
	confused	4
	inappropriate	3
	incomprehensible	2
	none	1
Motor response	obeys commands	6
	localises to pain	5
	withdraws from pain	4
	flexion to pain	3
	extension to pain	2
	none	1





Diffuse Axonal Injury





Blunt Force Trauma vs. Diffuse Axonal Injury

What do we do?

- Tracheostomy
- Feeding tube
- No DNR order

8 Weeks post-injury

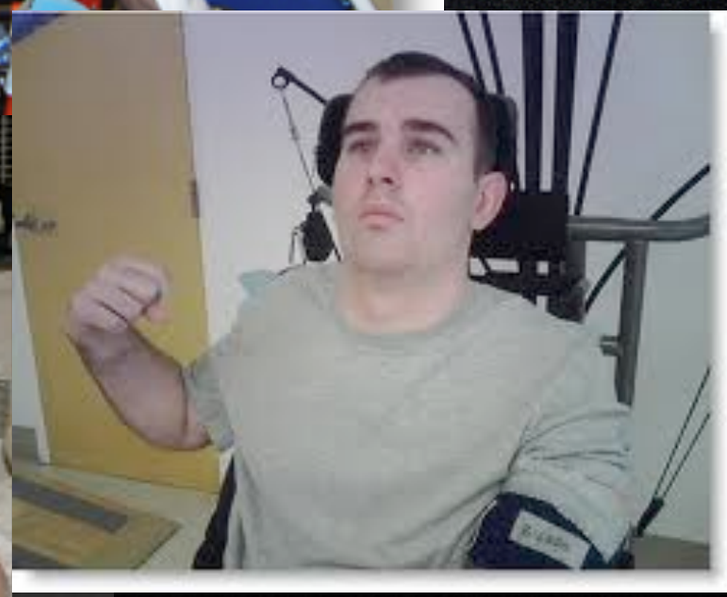
- Emerging
  - periodically “awake”
  - eyes dilated
  - blink on command
  - very slow tracking
  - move fingers on command
- Glasgow score 11
- Rancho Los Amigos 3
- Ready for rehab
- “Nichols is still alive?!”--- ICU nurse

Palo Alto VA Hospital

Fisher House, Palo Alto

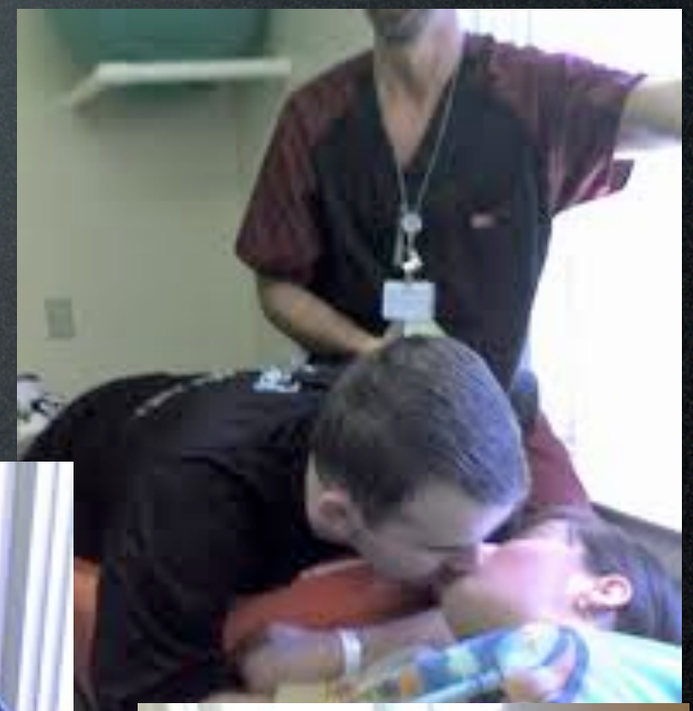
Let's get to work

- 3 months of wound healing
- 6 month stay
- decannulated
- developed yes/no
- daily PT, OT and speech
- recreation therapy



Kentfield Rehab & Specialty Hospital

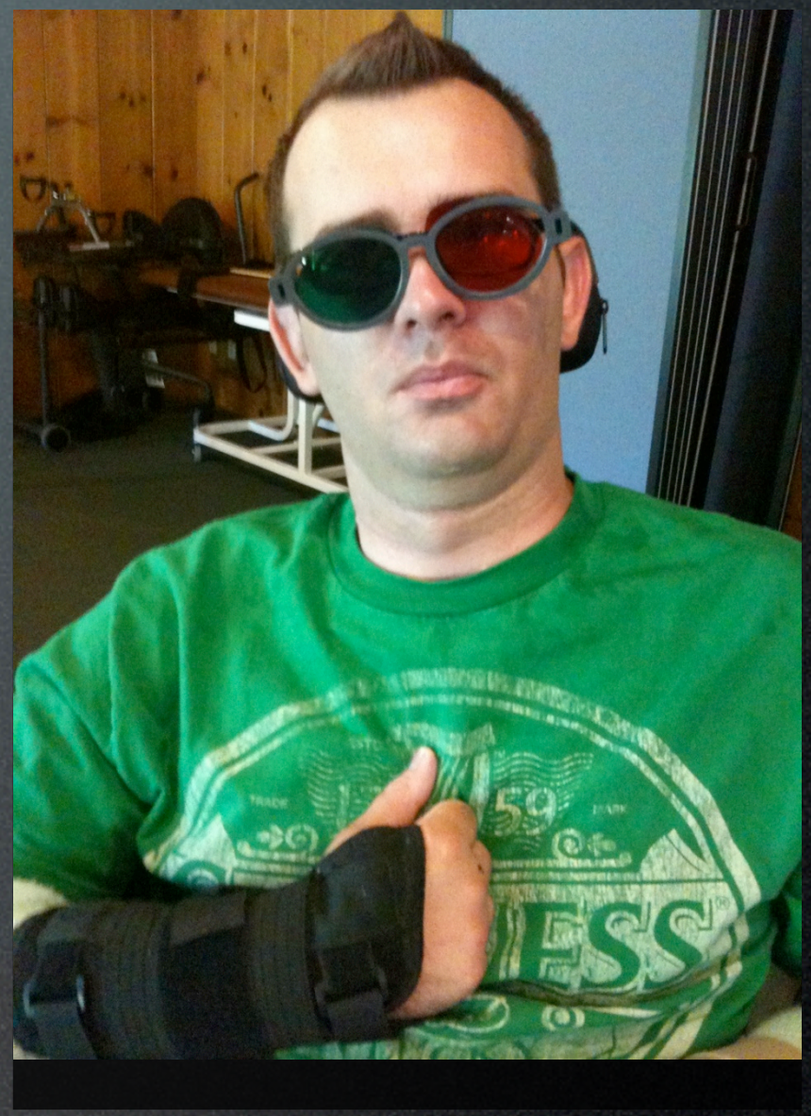
- off-label drugs (bromocriptine)
- dopamanergic drugs
- first words
- ADL progress
- PT, OT, Speech
  - 2x 30 min daily
- Rancho 3+ to 5-



Rancho Los Amigos Scale	
I. No Response	No response
II. Generalized Response	Slow, delayed, inconsistent response
III. Localized Response	Periodically awake, more movement, begin to recognize family, follows simple commands
IV. Confused-Agitated	Very confused and frightened, overreacts, highly focused on basic needs, very short attention span, difficulty following directions
V. Confused-Inappropriate, Non-Agitated	Pay attention for a few minutes, confused, overstimulated, memory problems lead to confabulation, perseveration, focus on basic needs
VI. Confused-Appropriate	Somewhat confused, follows schedule with assistance, needs routine, 30 minute attention span, easily distracted, ADLs with some help, knows he's in hospital but doesn't understand disability, more aware of physical than cog.
VII. Automatic-Appropriate	Follows set schedule, ADLs, problems planning and initiating, easily distracted, needs supervision because of compromised judgment, inflexible
VIII. Purposeful-Appropriate	Realizes prob w. thinking and memory, begins to compensate, thinking probs may not be noticeable, transition training

Back to Palo Alto

- *Vision Therapy
- turned head to conversational partner
- improved eye contact
- confabulation



Verbal Awakening

- more intelligible
- 1 session: 80% accuracy to SLP (known listener)
- longer utterances
- initiated conversation more often

Standard Tests

- <u>"Basic Encoding Skills" subtest of the Boston Diagnostic Aphasia Examination-3rd ed.</u>
-

Subtest	Raw Score	Percentile
Primer Word Vocabulary	6/6	100
Regular Phonics	5/5	100
Common Irregular Forms	5/5	100
Uncommon Irregularities	4/6	90

- *test presentation was modified to accommodate patient's physical needs

Weschsler Adult Intelligence Scale-Third ed.

Similarities and Differences subtest

- Similarities 29/33, 95th percentile
- Information 19/28, 75th percentile

Comprehension subtest

- Comprehension 18/33, 50th percentile

Arithmetic subtest

- Arithmetic 6/22, 1st percentile

*test presentation was modified to accommodate patient's physical needs

The Repeatable Battery of Neuropsychological Status

- List Learning 3/40,<1st percentile
- Story Memory 0/24,<1st percentile
- Line Orientation discontinued
- Picture Naming discontinued
- Digit Span: 8 raw score, 7th percentile- accurately recalled a string of 5 digits
- List Recall 0/10,<1st percentile
- List Recognition 15/20,<1st percentile
- Story Recall 0/10,<1st percentile

*test presentation was modified to accommodate patient's physical needs

Home Sweet Home

- 5/25/09
  - Western Neuro Sensory Stimulation Profile (WNSSP) 74/113
    - Rancho Los Amigos 4/5
- 9/28/10
  - WNSSP 113/113
  - Rancho Los Amigos 5/6

CareMeridian
THE CLOSEST THING TO HOME

Today

- still improving
- generally healthy
- still NPO due to dysphagia
- speaks with varying degrees of intelligibility
- left side hemiparesis
- right side ataxia
- global apraxia
- best speller I know
- funny, witty, sarcastic
- gentleman
- very affectionate

Current Status

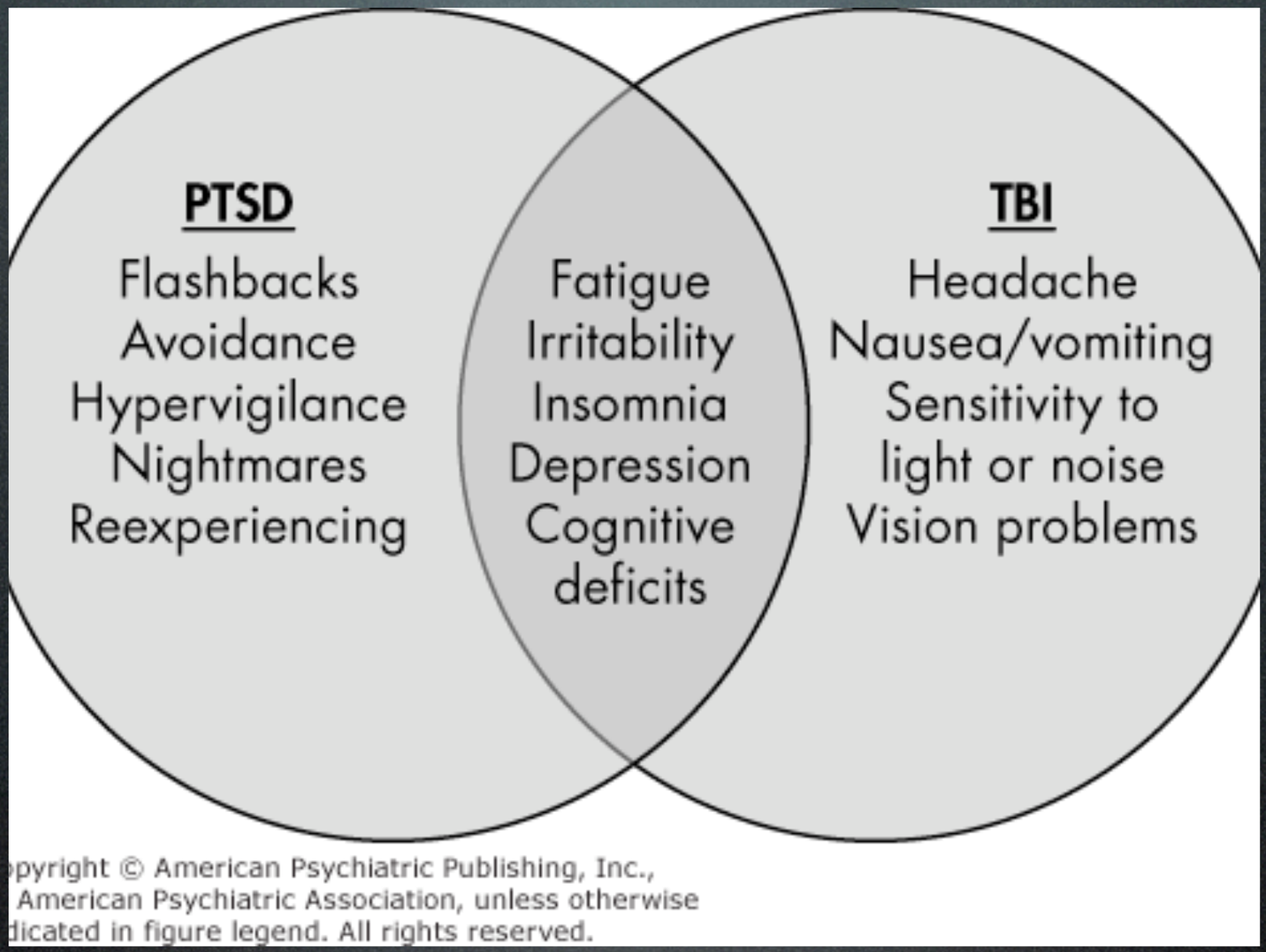
- Rancho Los Amigos 6-
- short-term memory
- confabulation
- left side progress
- right arm ataxia reduction
- improved swallow

Special Considerations

For Service Delivery to Veteran and Active Duty Patients with TBI.

Post Traumatic Stress Disorder

- Stress-related reactions after a traumatic event that don't remediate themselves, and which impact one's life (ptsd.va.gov).
  - Fear and anxiety
  - Guilt and shame
  - Sadness and Depression
  - Anger and irritability
  - Behavior changes



Common Symptoms

PTSD and Severity of TBI

-Glaesser et. al. March 2004 BMC Psychiatry:

-Although PTSD and TBI are not mutually exclusive, unconsciousness can play a protective role against PTSD.

-The more severe the TBI, based on length of time unconscious, not symptoms, the less likely one is to suffer from PTSD.

However…

- Service members often deploy multiple times; this may not be his first trauma.
- He may suffer from PTSD from a prior incident, even though he has no memory of the event that caused his TBI.

Other factors to be aware of...

- Substance Abuse:
  - 1 in 10 OIF/OEF vets seen at the VA are treated for Substance Use Disorder (SUD).
  - 1 in 3 veterans seeking treatment for SUD have PTSD.
  - More than 2 in 10 veterans with PTSD also have SUD.
- Depression:
  - 3-5 times more likely to occur with PTSD.
- Suicide:
  - Among combat trauma survivors, suicide risk positively correlates to frequency and intensity of combat trauma.

pstd.va.gov

Clinical Considerations

For Service Delivery to Patients with TBI

1. Take a deep breath and slow yourself down before you walk through the door.

- TBI patients are easily overstimulated. You need to approach him calmly, leaving your busy day in the hallway.

2. Make eye contact and remember he is a real person.

- It can be easy to think of someone as their injury. He is a person living with an injury. Even if he looks vacant, talking to him as if he isn't there will not draw him out.

3. Do not talk down to him or raise your voice.

- He is injured, not deaf and not an infant. A patient with a severe TBI needs to be drawn out, and approaching him with condescension will only cause him to withdraw.

4. Speak to the patient, not just the family member.

- If you want him to be engaged and involved in therapy, involve him.

5. Orient him

- If he has memory loss: he needs to know where he is, what happened to him, who you are, and why therapy is important for him. This may need to be repeated multiple times throughout a session. If he is confused, he will not perform at his best.

6. Do not spend too much time explaining your therapy plan.

- Informing him is good, but if you spend half of the session explaining your plan, he will disengage and you will not have time to execute the plan.

7. Expect a lot from him, but be sensitive to neural fatigue.

- It's okay to push him to work hard, but remember that everything he does is very hard work. Patients with TBI, even a mild TBI, suffer from neural fatigue, which is a degree of tiredness we cannot relate to. Try to schedule therapy based on his optimum level of alertness. For example, for many patients speech therapy right after PT does not yield great results, but for others it might be optimal.

8. Respect when he needs to rest.

- Sometimes sleep is the best medicine. If he is tired enough that he's falling asleep during therapy, he will get more out of a nap than he would therapy.

9. Be patient. It may be the 20th time for you, but he thinks it's the 1st time.

- Patients with TBI often have poor short-term memory. He can sense your frustration and impatience, which will only make any apraxia worse.

10. Believe in him and the plasticity of his brain.

- Focus on what is he able to do, and build on it. Focusing on what he cannot do will only discourage him. We don't give the brain enough credit. People can continue to make progress years post injury.

- The Brain that Changes Itself. By Norman Doidge

11. Praise his efforts and successes.

- Everything he does takes a tremendous amount of effort, so even a little praise and encouragement will keep him going.

12. Set him up for success.

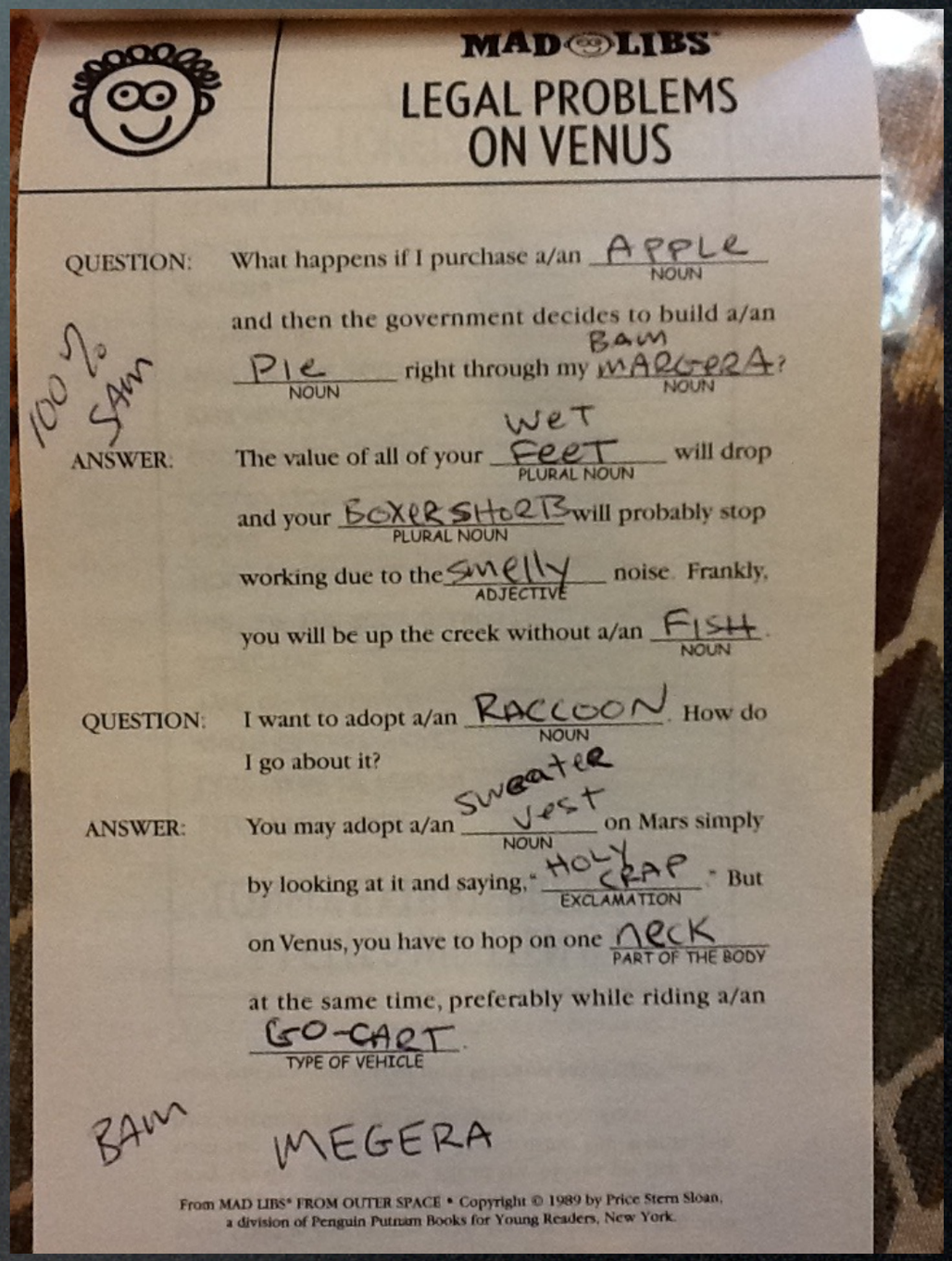
- Build on what he already can do and how far he's already come. Self confidence will go a long way. Constant frustration will deplete his motivation. Give him opportunities to feel accomplished.

13. Be positive

- Make therapy a positive experience, so he will want to engage.

14. Be creative

- Have fun. Mix it up.
  - mad libs
  - scavenger hunt



MAD LIBS

LEGAL PROBLEMS ON VENUS

QUESTION: What happens if I purchase a/an APPLE (NOUN) and then the government decides to build a/an PIE (NOUN) right through my BAM MARGERA? (NOUN)

100% SAM

ANSWER: The value of all of your WET FEET (PLURAL NOUN) will drop and your BOXER SHORTS (PLURAL NOUN) will probably stop working due to the SMELLY (ADJECTIVE) noise. Frankly, you will be up the creek without a/an FISH (NOUN).

QUESTION: I want to adopt a/an RACCOON (NOUN). How do I go about it?

ANSWER: You may adopt a/an SWEATER VEST (NOUN) on Mars simply by looking at it and saying, "HOLY CRAP (EXCLAMATION)." But on Venus, you have to hop on one NECK (PART OF THE BODY) at the same time, preferably while riding a/an GO-CART (TYPE OF VEHICLE).

BAM MEGERA

15. Give him power.

- He has no control over his life at this point. Offering him some simple choices will give him some semblance of power.

Clinical Considerations

for interacting with caregivers

1. Loved ones need your empathy, not your sympathy

- When someone gives me sympathy, it puts me in a position to comfort them. This is not professional. You can be both empathetic and professional at the same time.

2. Loved ones experience the stages of grief at different times.

- Be sensitive the fact that the wife may have reached acceptance, while the parents are still in denial.

3. Loved ones need to be educated, but they may not want all the answers right away.

- Some people want to know everything up front---bottom line. In my experience those people are in the minority. Most of us don't ask questions in the beginning, because we are afraid to know the answers. When the time is right, we will be ready to learn. As a clinician you can be sensitive to people's educational boundaries.

4. Use the loved ones as therapists in training, and encourage them to be creative.

- Both the patient and his loved ones can benefit from a few simple exercises. Use them to learn about your patient and customize therapy to him. Anything the family can do outside of therapy can get you and the patient closer to your goals.

As clinicians…

- I hope you are able to use this information to enhance your patient care.