Pediatric Brain Injury: Gray Matters

Things are not always black or white

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A Brief Commercial From Our Sponsor

Common Principles I try to follow as a Medical Expert

- Role is that of an educator
- Be true to facts and data
- Have thorough understanding of pathophysiology and clinical understanding
- Every case is different, no cookie cutter
- Forensic analysis approach to chart review
- All recommendations need to be data-driven, not theoretical
- Recommendations are individual-specific (benefit to the individual, e.g., therapies, DME, imaging)
- Think in terms of potential vs actual or probable vs possible
- Role of parent/spouse/family as familial vs caregiver (absence personal expectations)
- Maintain objectivity
- Goal of recommendations is to define those services and care: to prevent medical complications; anticipate, as best as possible actual lifetime needs to enhance; provide care to maximize outcome, minimize impairment
- Be very mindful of over-utilization or inappropriate ongoing services

My Role

- To provide a 360 degree strategy
- To see from both Defendant and Claimant Perspective
- To be deposition strong (bulletproof)
- To provide the LCP with strong medical insight
- To allow the LCP to stand strong under medical-rehab scrutiny

Applying Auto Insurance Standards to Medical Expert Chart Analysis

Insurance Expectations for Ongoing Therapy Services

Medical necessity for ongoing rehabilitative therapy services should be consistent with, but not limited to the following:

A) There must be an expectation that the patient's condition will improve significantly in a reasonable and generally predictable.

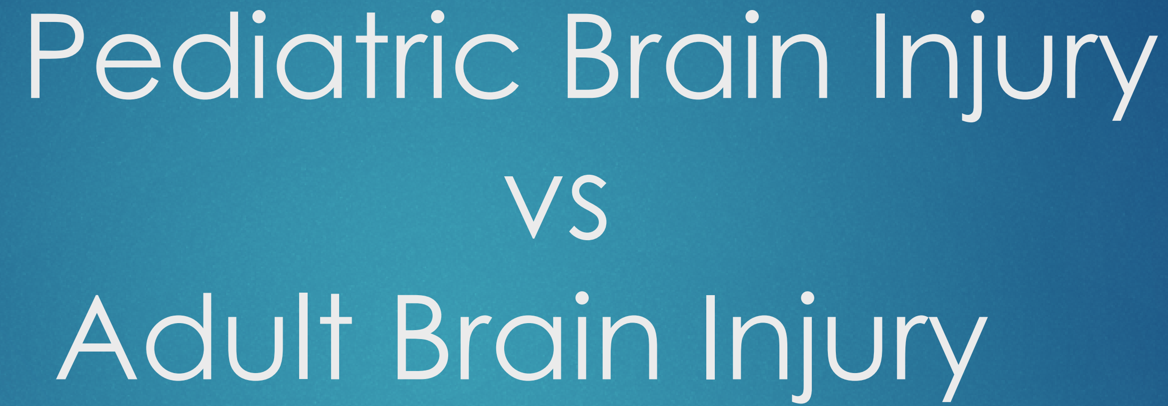
B) The amount, frequency and duration of the services must be reasonable under accepted standard of practice.

C) Clearly defined goals expectations and anticipated direct outcome from the services provided.

D) Acceptable Standards of Medical Practice refers to credible scientific evidence published in peer-reviewed literature generally recognized by the relevant healthcare community, specialty society evidence-based guidelines and recommendations or expert clinical consensus in the relevant clinical areas.

E) Effectiveness of treatment, with dynamic assessment that addresses progress, with functional derived outcome scales of measurement and performance variables.

F) Consistent and reliable documentation and evidence for acute or changing condition-specific disorders, distinguishable from chronic conditions that have previously been treated without significant documentable improvement; clear identification of reinjury/exacerbation/new process


Pediatric Brain Injury
vs
Adult Brain Injury

Developmental Growth Curve/Trajectory

Developmental Motor Curve/Trajectory

Developmental Emotional Curve/Trajectory

Developmental Sensory Curve/Trajectory

Developmental Communication Curve/Trajectory

Developmental Educational Curve/Trajectory

Developmental Sexuality Curve/Trajectory

Developmental Neurohormonal Curve/Trajectory

Milestones

Infant

Toddler

Child

Pre-teen

Teenager

Late Teen

Early Adult

Mid Adult

Late Adult

Milestones at 3 Months

- **Movement Milestones**
- Raises head and chest when lying on stomach
- Supports upper body with arms when lying on stomach
- Stretches legs out and kicks when lying on stomach or back
- Opens and shuts hands
- Pushes down on legs when feet are placed on a firm surface
- Brings hand to mouth
- Takes swipes at dangling objects with hands
- Grasps and shakes hand toys

- **Visual and Hearing Milestones**
- Watches faces intently
- Follows moving objects
- Recognizes familiar objects and people at a distance
- Starts using hands and eyes in coordination
- Smiles at the sound of your voice
- Begins to babble
- Begins to imitate some sounds
- Turns head toward direction of sound

- **Social and Emotional Milestones**
- Begins to develop a social smile
- Enjoys playing with other people and may cry when playing stops
- Becomes more communicative and expressive with face and body
- Imitates some movements and facial expressions

Stored memories, learned experiences, created engrams

Frequently many children with ATBI get “stuck” at this emotional stage

Pediatric ATBI

Pediatric ATBI

Age at Injury

Premorbid medical conditions

Premorbid learning disabilities/academic level of performance

Premorbid speech delay

Premorbid psychiatric dx (ADHD, ODD, ASD)

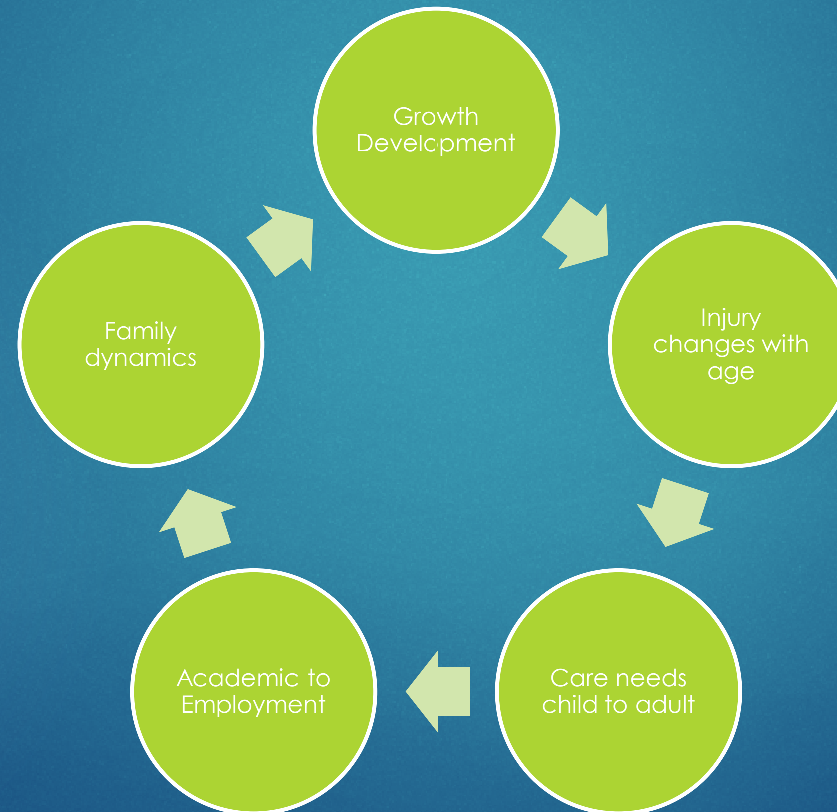
Premorbid socialization issues (social anxiety vs GAD)

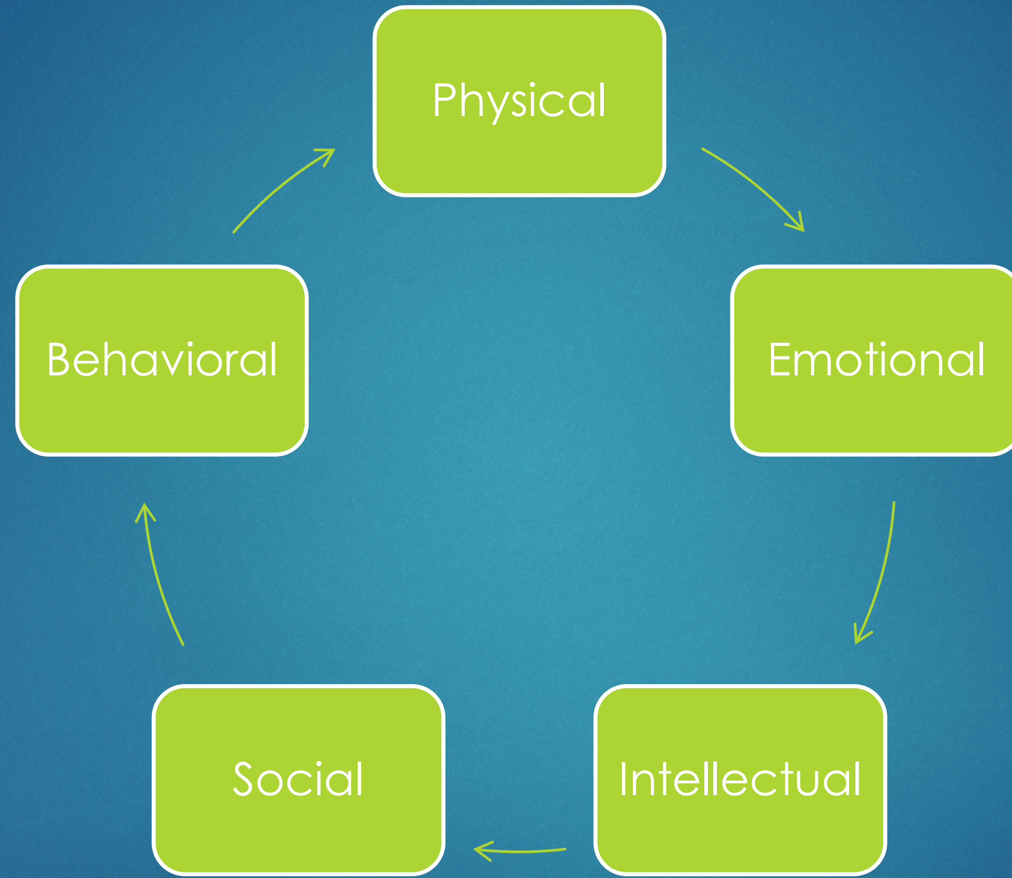
Pediatric ATBI Challenges

Prediction vs Planning

services, surgeries, therapies, DME, care

Pediatric ATBI Challenges




Physical
Emotional
Intellectual
Social
Behavioral

Pediatric ATBI Challenges

LONGEVITY

Longevity

from a medical expert perspective

Who determines?

Based upon what research?

Based on Pathology?

Based upon Neurodiagnostics (MRI, PET, Spect Scan…)

Based upon Clinical Variables (PTA, consciousness, seizures…)

Based upon Functional Performance (self feed, ambulation, communication…)

Pediatric ATBI Challenges

Caregiver vs Care worker

Social expectations of a parent

At what age does parenting stop

Medical vs Non medical expectations of parent

Parent Legal Obligation

Parents are legally required to support their minor children. Supporting your child includes providing food, clothing, shelter and basic care.

Parents are expected to meet child's emotional and physical needs. They are responsible for texting their children from harm and abuse. Parent also has stability of meeting their child's financial needs usually until the age of 18 or graduate from high school

Case 1

- 28-month-old male unremarkable past medical history, backseat restrained passenger in age-appropriate car seat, is involved in motor vehicle collision T-bone injury on the driver side. Patient with immediate loss of consciousness, GCS 7, intubated at scene. Extensive hospitalization in the intensive care unit, including MRI evidence of diffuse axonal injury, cerebral bleed, mildly dilated left lateral ventricle, subarachnoid hemorrhage, bilateral cerebral encephalomalacia. Patient spent 2-1/2 weeks in the intensive care unit then transition to regular pediatric floor then to the inpatient rehabilitation unit. Patient with right hemiparesis, decreased cognitive communication skills, dysphagia, global weakness, mild agitation, sleep disturbance. After 3 weeks on inpatient rehabilitation patient is transition outpatient pediatric OT PT speech. Patient has made progressive gains, is able to do short distance gait with min to mod PA, still requires NG tube for but is increasing oral tolerance, still with decreased sleep patterns, mild agitation, recognizes her parents.

CASE 2

- 10-year-old male history of ADHD, riding a bike without a helmet was struck by a motor vehicle going about 40 miles an hour. Patient was airborne and landed on the top of the hood rolled off and hit the cement. Patient was brought to level 1 trauma center with a GCS of 10, confused mildly combative. Patient did not present with any focal motor deficits. Patient spent 2 days in the hospital with orthopedic evaluation for right distal radial fracture. Trauma surgery evaluation for moderate splenic laceration not surgically required. PMR evaluation patient with confusion, mild restlessness, mild irritability nonfocal peripheral motor exam. PMR follow-up evaluations mom describes his behavior is more moody, does not listen as well, not exactly himself. 3 months post injury school performance is diminished compared to baseline, requires more assistance, not keeping his grades up.

CASE 3

- 13-year-old male admitted to the hospital level 1 trauma with traumatic brain injury, he was struck by a car while riding his bike without a helmet. GCS was 4/5. Patient had agonal respirations at the scene, patient intubated in the emergency department, head CT with nondisplaced right temporal bone fracture, right subarachnoid hemorrhage subdural hemorrhage subfalcine herniation. Patient underwent right hemicraniectomy, evacuation, developed post-obstructive hydrocephalus with VP shunt, developed post craniotomy infection requiring multiple antibiotics with drainage. Patient admitted to the hospital including IPR for 8+ weeks. Patient had significant weakness, ataxia, communication issues, dysphagia, gait disturbance, irritability, cognitive and emotional behavioral regression.

CASE 4

- 3-year-old male developed some abnormal jerking movements around 12 to 15 months of age, was evaluated by neurology after work-up treated with several antiepileptic medications. Diagnosed with seizures, had started to develop some slowing developmental motor and speech skills. Around 2 years of age seizure activity increased, seen by second neurologist treated for a different seizure pattern, started on changed seizure regimen. Developmental delay continued with work-up for autism.

This was defense case, LCP

Pediatric ATBI

how to proceed

- Presumption

- Assumption

- More likely than night

- Definite

- Anticipated need projects the child within each stage of growth and development (case 1 is a good example)

Look for individual differences between the individual from the general population that pooled data

Remember children grow into disability

Watch out for the 'they look so good"

Watch out for those children who make remarkable recovery what gets lost is what they look and function like now forward is very important

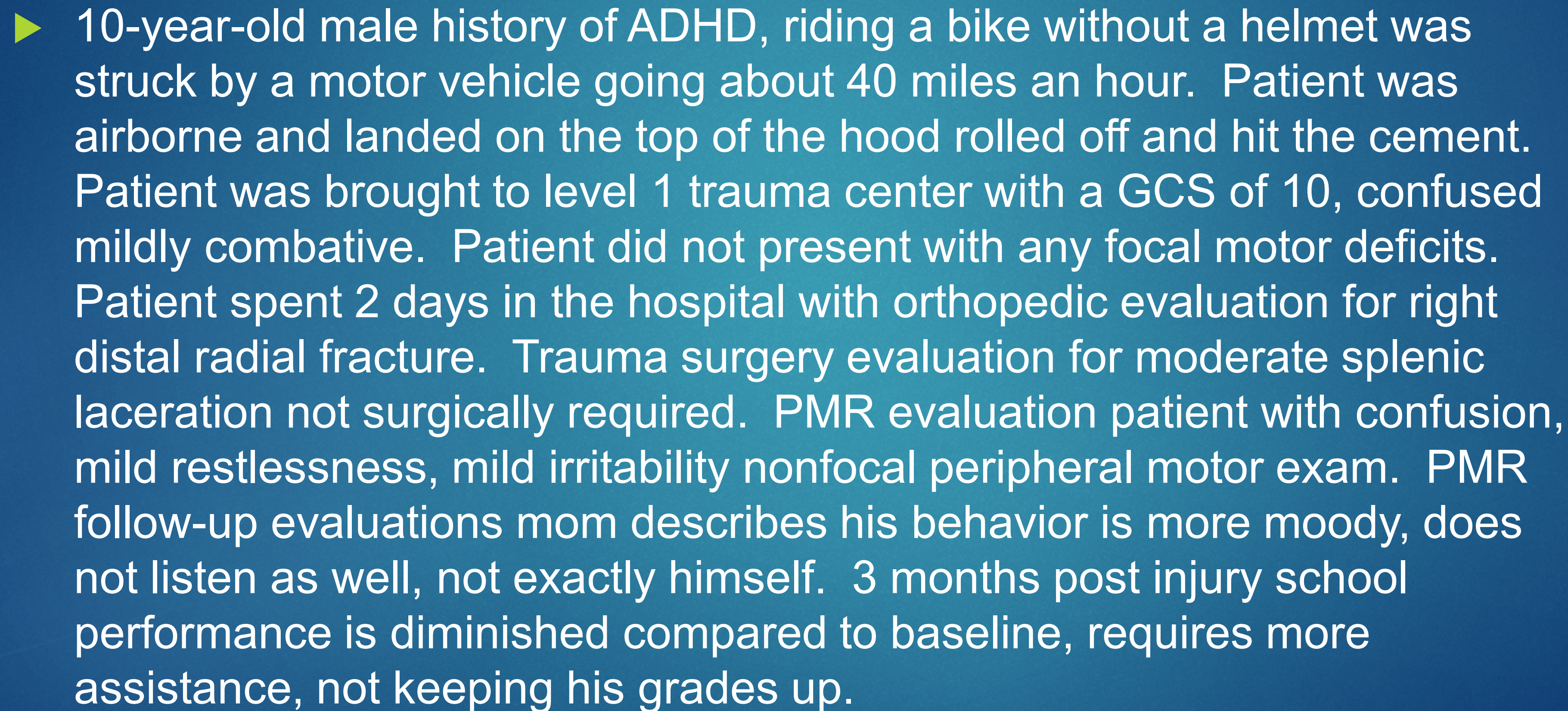
- Inability of the treating medical professionals to work with Nurse LCP
- Treating physicians may be limited in what knowledge they can provide to present and future needs
- Treating physicians give one-word answers
- Treating physicians don’t want to get involved with lawsuits

Presumption

A legal inference that must be made in light of certain facts. Most presumptions are rebuttable, meaning that they are rejected if proven to be false or at least thrown into sufficient doubt by the evidence. Other presumptions are conclusive, meaning that they must be accepted to be true without any opportunity for rebuttal.

An assertion or statement that is taken as true or supposed as a fact without proof or substantiating evidence.

So how does this apply to an LCP?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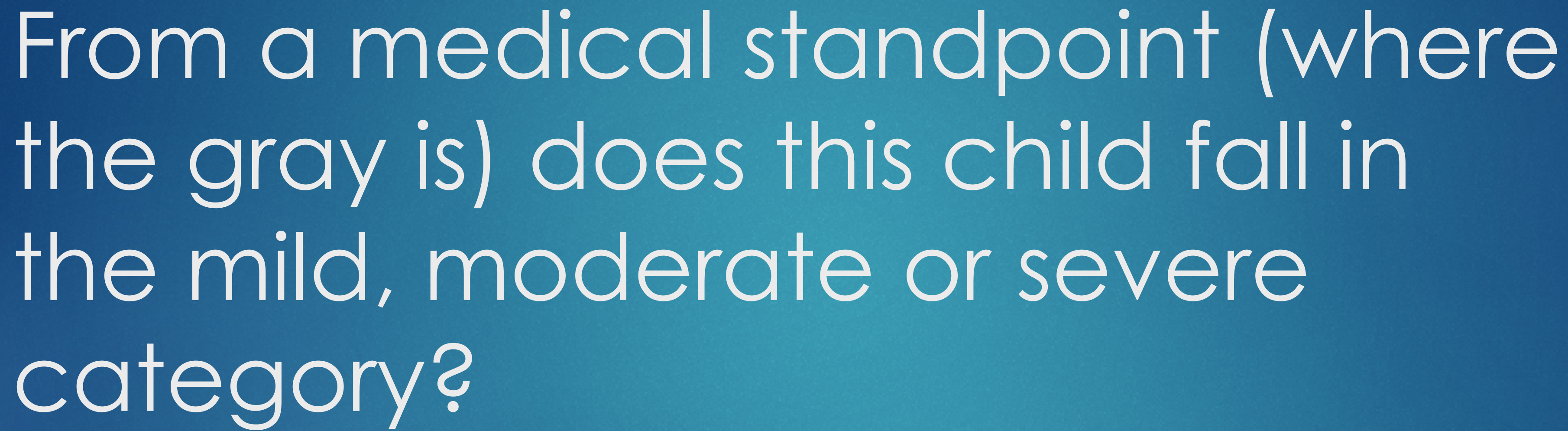
Assessment

- Moody / Sad
- Not listening
- More introverted
- Still treating with Ortho for arm fracture / healing
- Headaches
- Grades dropping
- Requiring assistance with schoolwork
- Forgetful
- Starting to make unsafe decisions

  attentional: jumps out of car when stopped doesn't wait

  emotional: inappropriate language around adults out of house

  social: more immature with peers


From a medical standpoint (where the gray is) does this child fall in the mild, moderate or severe category?

Nursing Diagnoses

- Risk for injury
- Impaired social interaction
- Interrupted family process
- Risk for caregiver role strain
- Impaired memory
- Chronic pain
- Risk for ineffective relationship
- Risk for ineffective activity planning
- Risk for loneliness
- Social isolation
- Ineffective coping
- Impaired mood regulation

Mild Impairment

RECOMMENDATION	CPT CODE	FREQUENCY / REPLACEMENT AGE 10-18 (8 years)	FREQUENCY / REPLACEMENT AGE 18-LE (59 years)	COST	FREQ	TOTAL
MEDICAL CARE						
Visits, Physiatrist	99214	Yearly (Allow 8)	Every 5 years (Allow 11)	$250.00	19	$4,750.00
Visits, Neurologist	99214	Allow 1-3	As needed	$250.00	2	$500.00
Visits, Orthopedist	99213	Allow 2-4	As needed	$185.00	3	$555.00
Visits, Primary Care	99213	TBD beyond routine scheduled visits		$185.00	TBD	TBD
THERAPEUTIC EVALUATIONS & MODALITIES						
Physical Therapy Evaluation	97162	Allow 1	n/a	$200.00	1	$200.00
Physical Therapy Sessions	97110x2 97112x2	12 sessions per eval (Allow 12)	n/a	$300.00	12	$3,600.00
Occupational Therapy Evaluation	97166	Allow 1	n/a	$230.00	1	$230.00
Occupational Therapy Sessions	97110 97530x2 97535	12 sessions per eval (Allow 12)	n/a	$320.00	12	$3,840.00
Speech Therapy Evaluation (Cognitive)	97166	Allow 1	n/a	$230.00	1	$230.00
Speech Therapy Sessions (Cognitive)	97129 97130x3	12 sessions per eval (Allow 12)	n/a	$175.00	12	$2,100.00
Psychological Evaluation/Behavioral Psych Evaluation	96116	Allow 2	n/a	$300.00	2	$600.00
Psychotherapy/Counseling	90837	Allow 20-40		$200.00	30	$6,000.00
Therapeutic Counseling (family)	90847	Allow 20-40		$200.00	30	$6,000.00
DIAGNOSTIC STUDIES & LAB WORK						
X-ray, right arm	73090	Allow 2-4 with ortho visits	n/a	$100.00	3	$300.00
MRI, Brain (without contrast)	70551-26	Allow 1	As needed	$2,400.00	1	$2,400.00
HOME CARE						
Personal care needs (for safety/supervision, assistance with school work, etc.)		2-4 hours per week (Allow 156hrs/yr = 1,248hrs)	TBD	$20.00	1,248	$24,960.00
				TOTAL		$56,265.00

Severe Impairment

RECOMMENDATION	CPT CODE	FREQUENCY / REPLACEMENT AGE 10-18 (8 years)	FREQUENCY / REPLACEMENT AGE 18-LE (59 years)	COST	FREQ	TOTAL
MEDICAL CARE						
Visits, Physiatrist	99214	Every 6 months for 4 years, then yearly (Allow 12)	Every 3 years (Allow 19)	$250.00	31	$7,750.00
Visits, Neurologist	99214	Every 2 years (Allow 4)	As needed	$250.00	4	$1,000.00
Visits, Orthopedist	99213	Allow 2-4	As needed	$185.00	3	$555.00
Visits, Psychiatry	99213	Every 3 months for medication management (Allow 32)	Every 6 months (Allow 118)	$185.00	150	$27,750.00
Visits, Primary Care	99213	Yearly beyond routine scheduled visits		$185.00	67	$12,395.00
THERAPEUTIC EVALUATIONS & MODALITIES						
Physical Therapy Evaluation	97162	Allow 1	TBD	$200.00	1	$200.00
Physical Therapy Sessions	97110x2 97112x2	12 per evaluation (Allow 12)	TBD	$300.00	12	$3,600.00
Occupational Therapy Evaluation	97166	Allow 1	TBD	$230.00	1	$230.00
Occupational Therapy Sessions	97110 97530x2 97535	12 per evaluation (Allow 12)	TBD	$320.00	12	$3,840.00
Speech Therapy Evaluation (Cognitive)	97166	Every 6 months for 1-2 years (Allow 3)	TBD	$230.00	3	$690.00
Speech Therapy Sessions (Cognitive)	97129 97130x3	12 per evaluation (Allow 36)	TBD	$175.00	36	$6,300.00
Psychological Evaluation/Behavioral Psych Evaluation	96116	Yearly (Allow 8)	Allow 3	$300.00	11	$3,300.00
Psychotherapy	90837	Weekly for 4 years, then monthly (Allow 256)	4-6 times per year (Allow 295)	$200.00	551	$110,200.00
Therapeutic Counseling (family)	90847	Allow 25-75		$200.00	50	$10,000.00
DIAGNOSTIC STUDIES & LAB WORK						
X-ray, right arm	73090	Allow 2-4 with ortho visits		$100.00	3	$300.00
MRI, Brain (without contrast)	70551-26	Allow 1	As needed	$2,400.00	1	$2,400.00
HOME CARE						
Personal Attendant Care (for safety/supervision, assistance with school work)		16 hours every day during school (180 days/yr) 24 hours every day during breaks/weekends (185 days/yr) Allow 7320hrs/yr = 58,560hrs)	24 hours daily (Allow 8,760hrs/yr = 516,840hrs)	$20.00	575,400	$11,508,000.00
				TOTAL		$11,698,510.00

What about the middle?

RECOMMENDATION	CPT CODE	FREQUENCY / REPLACEMENT AGE 10-18 (8 years)	FREQUENCY / REPLACEMENT AGE 18-LE (59 years)
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Visits, Orthopedist	99213		
Visits, Psychiatrist	99213		
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Speech Therapy Sessions (Cognitive)	97129 97130x3		
Psychological Evaluation/Behavioral Psych Evaluation	96116		
Psychotherapy/Counseling	90837		
Therapeutic Counseling (family)	90847		
DIAGNOSTIC STUDIES & LAB WORK			
X-ray, right arm	73090		
MRI, Brain (without contrast)	70551-26		
HOME CARE			
Personal Attendant Care (for safety/supervision, assistance with school work)			

Any Questions?

Thank you so much!!

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