The Brain Recovery Project

BELIEVE IN THE OTHER HALF

School Assessments, Aids, Services, and Instruction Methods After Hemispherectomy

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The information provided herein is not a recommendation, referral, or endorsement of any resource, therapeutic method, or resource provider and does not replace the advice of medical, legal, or educational professionals.

VISION

Recommended assessments

ASSESSMENTS	PURPOSE
Functional vision evaluation	Typically conducted by teacher of students with visual impairments (TSVI). Evaluates how child uses vision for near, intermediate, and distance tasks. After hemispherectomy, components should include: 1) visual acuity; 2) field of vision; and 3) contrast sensitivity. Determines what enhancements and adaptations may be helpful to maximize the visual potential of the child.
Basic visual assessment	Conducted by optometrist or, preferably, developmental optometrist. Assesses for depth perception, eye alignment, binocularity, tracking, fixating, focusing ability, visual perception, and color vision. Determines the impact of ocular-motor challenges on underlying visual perceptual skills, academic challenges, and general level of fatigue, and to find out if there are supports available to compensate for these challenges. Gives recommendations for visual therapy.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Orientation and mobility services	A support service to help the child navigate their environment. Orientation and mobility services may be required for many years as the child changes classrooms, schools, or participates in different services and extracurricular activities.
1:1 dedicated aide	Helps the child navigate their environment, redirects their visual attention to the teacher and instructional materials. May be required for several years post-hemispherectomy until the educational team is confident that the child can safely navigate the environment and access the educational curriculum.
Boundary marking devices	May help a child read by looking at the last letter in long words or the end of a line on a page. Include hemi reading cards, rules, and similar devices.
Last letter cancellation therapy	Left hemispherectomy/right hemianopsia: Teaching the child to read by looking at the end of the words rather than the start of the words. The child locates and cancels out the last letter of each word with a red pen and practices this daily.
Next line/first part of word therapy	Right hemispherectomy/left hemianopsia: Teach the child to scan to the subsequent line of text as well as to see the first part of a word.

VISION

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Slant board	Brings visual material closer to the angle of the face.
Angle presentation	Place books, tablets, pages at a 45-degree angle so the child can see the whole page.
Vertical presentation	Present multiple choices vertically, rather than horizontally, so child can see all choices.
Seeing the whole word	Provide strategies to make sure the child sees the entire word and is trained to look at the middle/root of the word.
Instructional materials in alternative formats	Provide instructional materials in alternative formats (e.g. large print, books on tape) so that the child has supplementary access to the educational curriculum.
Accommodation or *modified curriculum	Provide worksheets that have minimal information on each page to minimize visual clutter. Child should be given additional support if they are required to create charts, graphs, diagrams, etc. Avoid visual exercises like word jumbles, crossword puzzles, complicated graphic organizers.
Check for understanding	Always check for understanding, especially for complex tasks. If needed, repeat the instructions.
Color coding	Color coded book spines for easier identification.
Special seating arrangements	Seat the child so that the classroom and instructor are in their visual field. Position desk close to the blackboard, or where distractions are reduced. Avoid glare and visual clutter. Allow student to walk up to blackboard if needed.
Study carrel	Availability of a study carrel to minimize visual distractions
Highlight work	Highlight important passages in instructional materials (e.g. operational symbols in mathematical equations.)
Extra time	Allow student extra time for responses or to finish tasks, tests, etc.
Assistive technology	Allow child to use audiobooks if reading is a challenge.
Verbal rope	Provide ongoing supervision for safety, especially on stairs and in crowded areas. Alert child of obstacles in missing visual field.

MOBILITY

Recommended Assessments

SCHOOL ASSESSMENTS	PURPOSE
Motor skills evaluation	Assesses gross motor skills (balance, coordination, ambulation) and fine motor skills (hand control and coordination.)
Occupational therapy assessment	Assesses sensory, gross and visual-fine motor skills, as well as balance and vestibular reflexes.
Physical therapy assessment	Assesses the student's ability to move within and around the educationally related school, home, and/or community environment, including architectural barriers across these environments that may prevent the child from benefitting from the educational program. Assess the need for and use of assistive devices (e.g. walkers, wheelchairs, prosthetic and orthotic devices). Assesses the student's ability to perform educationally related transfers (i.e., to/from desk, chair, toilet, floor, bus, cafeteria bench, car) and their ability to achieve and maintain these positions independently as well as the need for alternative positions and/or alternative positioning devices within the educational environment. Assesses bracing, pre-gait and gait training, muscle re-education, especially for lower extremities following trauma or surgery, prevention and management of orthopedic problems in trunk and lower extremities (i.e., range of motion, positioning, bracing, casting, splinting.) Physical therapists use activities to maintain, improve or restore the child's functioning, including gross motor development, ambulation, balance and coordination in various settings, including but not limited to the classroom, gym, bathroom, playground, staircase and transitions between classes. The school-based physical therapist promotes motor development and the student's participation in everyday routines and activities that are part of the educational program.
Orientation and mobility assessment	An orientation and mobility (O&M) assessment examines a child's ability to travel safely both indoors and outdoors, and with or without assistance, and considers sensory, navigational, visual, and mobility skills.
Adaptive physical education (APE) assessment	Assesses the child's ability to participate in their school physical education program and access their school environment, especially related to health and well-being (includes social group and interaction skills; play and leisure skills; social/emotional development; peer interactions; sportsmanship) as well as functional gross motor skills training in relation to mobility and play; endurance and conditioning programs for physical fitness; balance; body awareness; environmental adaptations; accommodations and adaptive techniques. The Adapted Physical Education (APE) teacher is an educationally trained professional who is able to assess individual students and develop, adapt, and implement specialized physical education programs in the motor domain. The APE teacher is a direct service provider, not a related service provider, because special education is a federally mandated component of special education services. This means that physical education needs to be provided to the student with a disability as part of the child's special education. This is contrasted with physical therapy and occupational therapy, which are considered related services.

MOBILITY

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Orientation and mobility services	A support service to help the child navigate their environment. Orientation and mobility services may be required for many years as the child changes classrooms, schools, or participates in different services and extracurricular activities.
1:1 dedicated aide	Helps the child navigate their environment and manipulate instructional materials. May be required for several years post-hemispherectomy until the IEP team is confident that the child can safely navigate the environment and access the educational curriculum.
Adaptive PE services	Adapted physical education is physical education which has been adapted or modified so that it is as appropriate for the person with a disability as it is for a person without a disability. APE is a support service to help the child achieve independence in functional gross motor skills, following directions, the ability to work in a group or team, the ability to take turns and share equipment, and the ability to participate in age-appropriate PE programs with peers. The APE teacher also helps staff with recommended modifications specific to the child's needs. Some modifications could include modified equipment, modified rules, prompts or cues, boundary/playing field changes, modified actions, modified time.
Physical therapy services	A support service to help the child access and physically manage their environment (functional mobility), achieve their gross motor goals (show adequate strength, balance and coordination to participate in functional activities in the context of the educational program), maintain good, upright posture, and improve bilateral functional awareness and hand use. Physical therapists also helps staff with suggested modifications and accommodations as well as utilizing appropriate assistive devices including walkers, wheelchairs, prosthetic and orthotic devices.
Occupational therapy (OT) services	OTs evaluate children's abilities, recommend and provide therapy, modify classroom equipment, and in general, help children participate as fully as possible in school programs and activities.
Monitor gross motor activities	For ongoing safety, paying particular attention to ascending and descending stairs, and climbing on playground equipment.
Additional transport time	Provide child with additional time to ambulate/travel to the next class.

FINE MOTOR

Recommended assessments

ASSESSMENTS	PURPOSE
Occupational therapy evaluation	Assess fine motor skills (hand control and coordination.) This might include working on handwriting or fine motor skills so the child can complete written assignments, working with the teacher to modify the classroom and/or adapt learning materials to facilitate successful participation.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Occupational therapy	Provides accommodations and assistive devices necessary for improved handwriting and/or keyboarding (grip, grip strengthening activities, postural supports, fatigue minimization, kinesthetic cues). Uses activities which promote muscle endurance and motor planning, improved balance, postural support and bilateral functional abilities. Provides adaptations for dressing, postural support/adaptations for toileting, support for utensil usage in feeding, and helps resolve sensory-based food resistance. Assists with management of instructional materials by providing exercises to improve visual tracking, scanning, vestibular or tactile issues. Promote independence in cafeteria and other school locations by developing adaptations and training the student and staff in their use.
1:1 dedicated aide	Helps the child with cutting, gluing, organizing items such as schoolwork, backpack, binders, etc.; provides hand-over-hand assistance for all educational tasks (writing, letter forming, turning pages) and helps the child organize himself or herself in their school environment (including work space in and around the desk.) Helps child navigate the educational environment and maintain good, upright posture. May be required for several years post-hemispherectomy until the team is confident that the child can access the educational curriculum and school environment without assistance.
Extra time to complete assignments	Motor planning and fine motor issues may make it difficult for a child to complete both in-class and at-home assignments in a timely manner.
Assistive technology	Use of computer or iPad for typing or dictation of writing assignments, or allow verbal reporting.
Use an adapted version of Bal-A-Vis-X, Balametrics and/or Brain Gym techniques	To work on the development of an internal rhythm, the development of a more accurate sense of midline, and the ability to regain focus and grounding. This can be done as part of an occupational therapy program.

HEARING

Recommended assessments

ASSESSMENTS	PURPOSE
Standard hearing tests	Including, but not limited to, pure-tone and speech testing.
Central auditory processing assessment	Evaluate for central auditory processing disorder. Assessments should include sound in quiet, sound in noise, filtered sound, and dichotic listening. Only audiologists can diagnose a central auditory processing disorder. Audiologists look for auditory processing areas: Auditory figure-ground problems; auditory memory problems; auditory discrimination problems; auditory attention problems; auditory cohesion problems.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
1:1 dedicated aide	Redirects the child's auditory attention to the teacher and instructional materials; repeats the teacher's instructions to ensure the child understands the lesson; checks frequently for comprehension; removes the child from a loud environment if causing distress.
Individualized or speaker FM auditory system	Consider use of an amplification system, such as a wireless FM system, to reduce background noise and poor acoustics. The child wears a headset and the teacher wears a clip-on microphone. Use an assistive listening device in each of the child's classes and other group settings to compensate for background noise, if needed. FM systems have been used successfully with children and adults with auditory difficulties, including central auditory processing disorder after hemispherectomy, and have shown good improvement in classroom performance for a number of children. The use of an FM system allows them to receive instruction on practically a one-on-one basis. This results in improved classroom performance and reduces the amount of energy they expend just trying to understand confusing auditory input.
Preferential seating	Place the child in the classroom to optimize their hearing and minimize any auditory distractions. This should be away from hall or street noise and, in the absence of an FM system, no more than 10 feet from the teacher. Seating kids with auditory processing disorder in the front of the room and away distractions can help them focus.
Separate work area	Provide a quiet study/work area, or an isolated area such as a study carrel, for individual seatwork, testing, or tutoring to minimize difficulties with foreground/background discrimination. Testing should be done separately, in a room without auditory distractions. Some children perform better on tests of their knowledge when the questions are read to them.

HEARING

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Try to minimize dichotic listening situations	Reduce or eliminate the need for the child to focus on one conversation or information while ignoring other conversations. Instructions or information should not be given when the child needs to listen to peers and teacher(s) at the same time, for example.
Modify environment	Reduce background noise. Make adaptations to the listening environment to reduce/eliminate the need for the listener to focus on auditory information while ignoring competing auditory messages.
Removal of noise sources	Reduce or remove mechanical (fans, announcement speakers) or other competing noise sources from within or outside the room. For children with heightened sensitivity, a quiet classroom may be required (no loud singing, clapping, fire drills, etc.)
Improved acoustics	Closing doors and windows minimizes outside noise.
Speak slowly	Avoid using rapid rates of speech. Emphasize critical information by increasing the silent period before a key word is said.
Listening/attention breaks	Allow at least one period of the day when the child does not have to listen to instructions or verbal information to allow the brain a rest period. Because of the effort of processing sound with only one hemisphere, the child's brain might literally 'shut off' at times because he is unable to process the information. In that case he would appear inattentive, or maybe even put his head down.
Augment verbally presented information	Instructions should employ visual or multimodality cues and hands-on demonstrations to augment verbally presented information. Additionally, slowing speaking rate, repeating key information, rephrasing information using less complex linguistic units, and providing instructions in written form may be helpful.
Classroom visuals	The teacher uses images and gestures to reinforce the child's understanding and memory.
Note taker	A note taker may be required to ensure that auditory instructions and lessons are recorded accurately, especially in late elementary school and beyond when learning subject matter becomes critical to success in school.
Mark transitions between activities	Students with auditory processing difficulties often need more time to make transitions. Therefore, it is important to mark transitions between activities by clearly identifying the new activity by naming and identifying the sequence of steps needed to accomplish the task. Clearly close an activity by briefly summarizing what the student should have learned or completed.

HEARING

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Repeat rather than rephrase instructions	The child with central auditory processing disorder will have more difficulty if they have to process a new set of instructions. Avoid multi-step instructions.
Redirect attention; use cueing	Be sure to have the child's attention before telling or showing her something. Use cueing to help her become aware when she is not paying attention - maybe a visual cue (such as tapping the ear or drawing attention to the eyes) or auditory cue (say, "ready?"). Cue the child to listen, then look or vice versa but not both at the same time.
Check for understanding	Frequently check for understanding. Ask the child to tell you what he is going to do.
Encourage 'whole body listening'	Teach the child to place their body in an alert posture by straightening the spine, incline upper body and head toward the speaker, keep eyes firmly on the speaker, avoid activities that distract attention from the speaker.
Quiet rooms for taking tests	Allow the child to take examinations in a quiet room to minimize auditory distractions.
Noise-canceling headphones	Use noise-cancelling headphones when the child is doing 'quiet work' so that the child can have an auditory processing break.
Neuro-Motor Therapies	Neuro-motor therapies involve the combined use of movement and neurologically stimulating activities. Since central auditory processing disorder can sometimes affect the vestibular system, sensory integration issues and movement issues (i.e. balance, coordination, timing) can arise. Neuro-motor therapies strive to bring the vestibular system back into balance while stimulating the brain in an effort to reorganize and balance the entire system.
Use an adapted version of Bal-A-Vis-X, Balametrics and/or Brain Gym techniques	To work on the development of an internal rhythm, the development of a more accurate sense of midline, and the ability to regain focus and grounding. This can be done as part of an occupational therapy program.
Therapeutic Listening	To promote improved spatial awareness, vestibular processing, and central peripheral processing.
Assistive Technology	Use of computer or iPad for typing or dictation of writing assignments; and audio books.
Dichotic Listening Training	Such as CAPDOTS. See CAPTDOTS.com.
Fast ForWord-Language training	The program uses slow and exaggerated speech to improve a child's ability to process spoken language. As children advance through the program, subsequent language exercises use gradually faster and less exaggerated speech.

HEARING

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Earobics and Laureate Learning Systems software	Groups of children worked on the computer intervention exercises at their own pace wearing headphones and supervised by a speech-language pathologist.
Individual language intervention	One-on-one work with a speech-language pathologist.

COGNITIVE AND LEARNING DISABILITIES

Recommended assessments

ASSESSMENTS	PURPOSE
Psychoeducational Assessment	During this evaluation, a licensed psychologist works with the student to get a better understanding of how his or her thinking processes work and what his or her strengths and weaknesses are as a learner. It can also include looking at aspects of the child's personality like moods and temperament and on typical roles and behaviors in the student's family. There may be testing involved, as well as looking at student work and conducting interviews. The psychoeducational assessment contributes information about processes which affect learning, thinking, and behavior, and thereby provides a basis for designing an educational plan that builds on the student's strengths and helps to overcome weaknesses. The psychoeducational assessment is also important in the prevention of educational, behavioral, and social/emotional difficulties through the early identification of the special needs of a student. Comprehensive assessment and evaluation of students with learning disabilities should include: 1. oral expression 2. listening comprehension 3. written expression 4. basic reading skill 5. reading fluency skills 6. reading comprehension 7. mathematics calculation 8. mathematics problem solving

COGNITIVE AND LEARNING DISABILITIES

Recommended assessments

ASSESSMENTS	PURPOSE
Neuropsychological assessment	Provides the most comprehensive and accurate picture of the child's cognitive and learning profile. Describes how the child's brain processes new and novel information. Describes child's cognitive strengths and weaknesses in detail. Extremely useful in the educational planning for students with developmental disabilities. More extensive than an educational psychology evaluation, it assesses all areas of functioning in detail and can provide intervention recommendations in each unique area. Assesses the following areas: facilitators/inhibitors (allocating and maintaining attention, working memory, speed and efficiency of cognitive processing); basic sensorimotor capabilities (sensory functions, fine motor functions, visual-motor integration skills, visual scanning, gross motor functions); cognitive processes (visuospatial processing, auditory processing, learning and memory processing, executive functioning); acquired knowledge (acculturation knowledge, language abilities, reading achievement, written language achievement, mathematics achievement).
Speech and language (SLP) assessment	Assess for a specific learning disability (SLD). Specific learning disability is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write (dysgraphia), spell, or to do mathematical calculations (dyscalcula), including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. It does not include intellectual disability.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Individual language intervention	Helps the child navigate their environment, redirects their visual attention to the teacher and instructional materials. May be required for several years post-hemispherectomy until the IEP team is confident that the child can access the educational curriculum.

COGNITIVE AND LEARNING DISABILITIES

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Speech therapy	Verbally teach strategies for conversation, such as give and take, beginnings and endings of a conversation, how and when to change the subject, formal versus informal speech and tone of voice. Verbally teach strategies for assessing body language (facial expressions, correct social distance, etc.). Talk through situations in order to give the child a verbal view of someone else's internal speech process. Help the child develop a sequence of steps for self-monitoring, verbalizing each step. Verbally point out distinctions between appropriate and inappropriate behavior; group the child with good role models. Speech therapy should be 1:1 to avoid competing noise/central auditory processing challenges.
Whole language	In addition to traditional reading interventions, including phonics, a whole language approach to reading intervention should be employed. Whole language teachers emphasize the meaning of texts over the sounds of letters, and phonics instruction becomes just one component of the whole language classroom.
Comprehension strategies	Use multi-modal comprehension strategies (repeating the meaning of a story, use visual and auditory aids, etc.) to assist with reading comprehension.
Rapid automized naming	**Use caution** with read aloud tactics, including rapid automized naming. Because of motor planning, dysarthria, hemianopsia, and other physical and visual challenges, the child may be unable to see the word and then speak it quickly.
Task analysis	Break down complex tasks into smaller, sequenced pieces with clear steps. (Before a big writing project, for example, the child may need instruction on how to break the project down into manageable chunks.)
Extra time to complete assignments	Provide additional time to complete any timed tasks such as tests and assignments.
*Modified curriculum	Decrease the required quantity of written work. Give short assignments that can be done successfully. Structure information and provide context.
Study guide outlines of key concepts	Use schedules and lists wherever possible. Use a homework book, organizer or notebook to keep help the child track of homework assignments.
Use discussion rather than lectures to develop and integrate ideas	Allow the child to verbally expand upon their ideas, which helps to process information.

COGNITIVE AND LEARNING DISABILITIES

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Highlight work	Highlight important passages in instructional materials.
Unimodal (rather than multisensory) instruction	Whenever possible, teach verbally followed by visual presentation (for example: tell the child what he is going to do, model it, ask him to say what he is going to do, then have him do it).
Modified environment	Eliminate distractions, both environmental and informational. Provide a study carrel to minimize distractions (or a quiet place to work outside of the classroom, where appropriate).
Special seating arrangements	Seating where the child learns best. This could be near the teacher's desk or away from distractions.
Graph paper	Use graph paper for math assignments, to keep columns aligned and numbers organized.
Check for understanding	For open ended questions, follow up with other questions to determine if the child actually knows the information taught.
Assistive technology (see below)	Allow verbal reporting as an acceptable alternative to writing. Allow the student to use a computer and email for home-work assignments. Allow the use of calculators for math problems and tests.
Peer note taker	Class notes shared by another student.
Extra help with organizing work	A master notebook for all subjects. A homework notebook that teacher and parents can sign off on daily. Key points from the day's lessons are listed on the blackboard. A routine of checking in with the teacher after class to briefly discuss the lesson.

SPEECH AND LANGUAGE

Recommended assessments

ASSESSMENTS	PURPOSE
Speech and language assessment	Speech-language pathologists (SLPs), often informally known as speech therapists, are professionals educated in the study of human communication, its development, and its disorders. SLPs assess speech, language, cognitive-communication, and oral/feeding/swallowing skills to identify types of communication problems (articulation; fluency; voice; receptive and expressive language disorders, etc.) and the best way to treat them. Assess nonverbal areas of comprehension and social/pragmatic skills, and evaluate crucial aspects of language such as segmental phonology, syntax, and morphology, as well as language meaning, language in context, such as pragmatics, prosody, and meaning to determine current levels of functioning and eligibility for speech/language services.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Speech and language services	Can help to facilitate language development, especially social language to develop/enhance social skills with peers, reinforce teaching of social responsibility, interpret non-verbal responses, sarcasm and intonations (language processing), and develop imagination skills. Should be provided in a 1:1 environment to avoid central auditory processing challenges.
Melodic Intonation Therapy	Melodic Intonation Therapy (MIT) is a therapeutic process used by music therapists and speech-language pathologists to help patients with communication disorders caused by damage to the left hemisphere of the brain. One of the few accepted treatments for severe, nonfluent aphasia is Melodic Intonation Therapy (MIT), a treatment that uses the musical elements of speech (melody & rhythm) to improve expressive language by capitalizing on preserved function (singing) and engaging language-capable regions in the undamaged right hemisphere.
1:1 dedicated aide	Assists with implementing speech and language therapies. Provides hand-over-hand assistance with sign language/modified signs or assistive technologies. Provides communication prompts.
Occupational therapy services	To provide supports and training for the child to achieve functional communication.

ASSISTIVE COMMUNICATION

Recommended assessments

SCHOOL ASSESSMENTS	PURPOSE
Assistive technology assessment	To review the need for any assistive technology devices or services (low tech to high tech) needed for the student to benefit from education, including the use of such devices in the student's home or in other settings. It can helpful to minimize the academic demands on the child via these resources if possible so as to free up cognitive resources for richer learning.
Augmentative and alternative communication (AAC) assessment	The AAC assessment should focus on identifying communication options for persons with communication impairment and determines the most appropriate high-tech, low-tech and/or no-tech solutions, which may be combined with a speech generating device, computer software, and/or an alternative keyboard or mouse. The following areas of functioning are typically considered within an AAC evaluation: • speech; • language; • other means of communication; • vision and visual processing; • physical movement abilities; and, • seating and positioning. Therapists (generally speech language pathologists and occupational therapists with expertise in the area of augmentative communication, or some school districts have AAC specialists) develop and assist in the creation of new applied technologies.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Assistive technology service	To support the students' assistive technology needs at home (for homework) and at school.
1:1 dedicated aide	Helps manage their assistive technology devices, including providing hand-over-hand assistance with technology interface (e.g. iPad swiping, typing) and prompting. May be required for several years post-hemispherectomy until the IEP team is confident that the child can access the educational curriculum via the communication device.
Assistive technology devices	Communication boards, voice-output devices or other system to facilitate social interactions with peers (and others), and to indicate choices.

BEHAVIOR

Recommended assessments

SCHOOL ASSESSMENTS	PURPOSE
Psychoeducational assessment	The psychoeducational assessment contributes information about processes which affect learning, thinking, and behavior, and thereby provides a basis for designing an educational plan that builds on the student's strengths and helps to overcome weaknesses. The psychoeducational assessment is also important in the prevention of educational, behavioral, and social/emotional difficulties through the early identification of the special needs of a student.
Occupational therapy assessment sensory profile	The sensory profile is a standardized tool for measuring sensory abilities and the effect those abilities have on functional performance in children three to ten. It is a judgment-based questionnaire that evaluates how a child responds to visual, auditory, touch, taste, movement, and multi sensory stimuli. A classification system based on means is used to rate the child's responses in comparison to a normative sample of children. It is helpful in determining whether there is a strong pattern of over- or under-responsiveness to sensory input in general, as well as in which areas those atypical responses are most often seen.
Functional behavioral assessment (FBA)	Functional Assessment or Functional Behavioral Assessment (FBA) involves the collection of data, observations, and information to develop a clear understanding of the relationship of events and circumstances that trigger and maintain problem behavior. The FBA is a process for determining the function of the child's problem behavior. The FBA relies on a variety of techniques and strategies to identify the reasons for a specific behavior and to help educational teams select interventions that directly address the problem behavior.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Applied behavior analysis	Design, implementation, and evaluation of environmental modifications to produce socially significant improvement in human behavior. Applied Behavior Analysis uses antecedent stimuli and consequences, based on the findings of descriptive and functional analysis, to produce practical change." This definition places emphasis on socially significant changes, but Applied Behavior Analysis can be used to alter virtually any behavior irrespective of its social relevance.
Joint Attention, Symbolic Play, and Engagement Regulation (JASPER)	A new intervention for children who make slow or limited progress in verbal skills. Focus on core areas of engagement, play, and social communication.
1:1 dedicated aide	Implements behavioral interventions. Helps facilitate appropriate social interactions with peers, as needed, navigating friendships, etc. May be required for several years post-hemispherectomy until the educational team is confident that the child can access the behavioral interventions and educational curriculum.

BEHAVIOR

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Behavior Intervention/Modification Plan	Flows out of the functional behavior assessment. Behavior modification assumes that observable and measurable behaviors are good targets for change. All behavior follows a set of consistent rules. Methods can be developed for defining, observing, and measuring behaviors, as well as designing effective interventions.
Antecedent-behavior-consequence (A-B-C)	Antecedent-behavior-consequence (A-B-C) analyses are used to determine patterns in the occurrence of the antecedents, behaviors, and consequences that relate to the problem behavior.
Positive Behavioral Support (PBS)	Positive Behavioral Support (PBS) is an empirically validated, function-based approach to eliminate challenging behaviors and replace them with prosocial skills. PBS can target an individual student or an entire school, as it does not focus exclusively on the student, but also includes changing environmental variables such as the physical setting, task demands, curriculum, instructional pace and individualized reinforcement. PBS begins by building a behavior support team of key individuals and stakeholders who are most involved in the child's life. Team members collaborate in multiple ways in order to develop, implement, and monitor a child's support plan.
Specialized academic instructions	This could include frequent eye contact from the child's teacher to keep him engaged.
Sensory strategies or a sensory diet	Children with sensory processing disorder may benefit from a treatment program of occupational therapy with a sensory integration approach.
In-class tools to reduce fidgeting.	The child could hold a squeeze ball. Or his teacher might wrap the child's chair legs with a latex resistance band for him to kick.
Task management	A cue to quietly keep the child on task. This could be a touch on the shoulder or a sticky note placed on his desk.
Scheduled breaks throughout the day	Allow the child to leave the classroom as often as needed throughout the day, preferably with a task or errand.
Availability of a study carrel or quiet place to work	Child can be overwhelmed by processing too much information, which can result in behavior problems. Pre-empt this by keeping this child's environment as free from distractions as possible
Listening therapy	Listening therapy (LT) is a therapeutic program to improve the neurophysiological foundation for integrating sensory input by using specific sound frequencies and patterns to stimulate the brain. One of these is Integrated Listening Systems (iLs), which is used in combination with OT (occupational therapy).

MENTAL HEALTH

Recommended assessments

SCHOOL ASSESSMENTS	PURPOSE
ERMHS (Educationally Related Mental Health assessment)	Conducted by the school district psychologist, this assessment determines whether the child's disability may be serious enough to warrant special mental health and therapeutic interventions to enable him to make friends and socialize appropriately.
Neuropsychological evaluation by an experienced neuropsychologist	Can pinpoint areas of deficiency and identify the necessary strategies.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
School-based counseling services	Helps child overcome personal and interpersonal problems.
School social worker	Addresses social and psychological issues that can block academic progress (poverty, substance abuse, family violence, social isolation.)
Parent counseling and training	Assist parents in acquiring skills to support the implementation of their child's Individualized Education Program (IEP). In some cases this may involve helping the parent to gain skills needed to support IEP goals and objectives at home. This purpose can be accomplished by: • Assisting parents in understanding the educational needs of their child; • Providing parents with information about child developmentl • Providing support and basic information about a child's initial placement in special educationl and • Providing parents with contact information about parent support groups, financial assistance resources, and other potential sources of information or support outside the school system.
Educationally Related Mental Health Services	ERMHS services provided depend upon your child's needs, but can include outpatient mental health counseling, family therapy, parent counseling and training, day treatment, therapeutic services provided at a nonpublic school, and coordinated, case-managed mental health service provided by a therapeutic team, sometimes called wraparound services.
Social-emotional support	Consider a social thinking goal, speech or social skills group, 1:1 support to assist with peer interactions.

HEALTH

Recommended assessments

SCHOOL ASSESSMENTS	PURPOSE
Health assessment	School health services review the child's medical needs.

Supplementary aids, services, and instruction methods

RECOMMENDED SUPPLEMENTARY AIDS, SERVICES, AND INSTRUCTION METHODS	PURPOSE
Seizure plan	Developed with input from the parents, the child's physician, and school staff, so that everyone is in agreement regarding how seizures should be managed. The following information should be clearly described in the plan: • what type(s) of seizures the student has, what they look like, how long they typically last, how often they occur, and when they are most likely to occur • what seizure triggers exist, if any, and what can be done to avoid them • what happens before and after a typical seizure (auras, other warning signs, symptoms after the seizure) • what first aid is needed (including what to do and what not to do; also including magnet use instructions if student has Vagus Nerve Stimulator) • aftercare needed (e.g. time and a place to rest, plans to deal with incontinence, how to decide if student is sent home) • when to call 911 and when/how to contact parents • when and how to administer "as-needed" medications (e.g. Diastat, Ativan), including who administers them, post-administration monitoring needed, and training required to administer them • daily antiepileptic medications taken (including dosage, timing, and side effects) • how to document seizures and side effects and how to share this information with parents • what to do with other students when a seizure occurs • any additional activity restrictions or safety precautions required Ideally, the entire school staff should be trained in seizure recognition and first aid and should be familiar with or have access to the seizure response plan. Those staff members who work most often with the student should be very familiar with the plan, and should be encouraged to review the plan periodically. Such a plan can be included in an Individualized Educational Program (IEP) or a Section 504 Plan, or it can stand on its own.
Hydrocephalus symptom awareness	The educational team should be familiar with the symptoms of hydrocephalus, and similarly shunt failure, and report them to the parent immediately.

SUPPORTS FOR SCHOOL PERSONNEL

Supports for school personnel are those that would help them to more effectively work with the student. This could include, for example, special training for a student's teacher to meet a unique and specific need of the student. In the U.S., the individualized education plan must describe the supports for school personnel that will be provided on behalf of the student in order for the student to advance toward attaining the annual goals, to be involved in and progress in the general curriculum and to participate in extracurricular and other nonacademic activities. These supports for school personnel are those that are needed to meet the unique and specific needs of the student.

Examples of supports that may be provided for school personnel include:

- information on a specific disability and implications for instruction;
- training in use of specific positive behavioral interventions;
- training in the use of American Sign Language;
- assistance with curriculum modifications;
- behavioral consultation with school psychologist, social worker or other behavioral consultant; and/or
- transitional support services.

**Caution should be used when modifying the educational curriculum. Modifications alter what the student is expected to learn, and should only be used when accommodations have been exhausted.*

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