Starting Early: Early Intervention Concepts, Strategies and Delivery of Therapy for Infants in the First Two Years

Cincinnati Children’s Hospital Medical Center
The Aaron W. Perlman Center
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Julie Linebach, OTR/L
Melissa Tally, PT, MPT, ATP
Elizabeth Willig-Kroner, MA, CCC-SLP
Speaker Names:
Julie Linebach, OTR/L
Melissa Tally, PT, MPT, ATP
Elizabeth Willig-Kroner, MA, CCC-SLP

Disclosure of relevant financial relationships
We have the following financial relationships to disclose:

Employees of: Aaron W. Perlman Center; Cincinnati Children’s Hospital Medical Center

Disclosure of off-label and/or investigative uses:
I will not discuss off label use and/or investigational use in my presentation

The Perlman Center has releases for all photos and videos used in this presentation.

Note: The Perlman Center uses a variety of adaptive equipment. The hands-on portion of this presentation includes common commercial infant products and complex rehab equipment. The Perlman Center has not been paid to represent any of the products discussed in the presentation or shown this date.
Objectives
Participants will be able to discuss:

1. New evidence supporting early intervention for the high risk infant for CP from birth to two years and the potential to maximize outcomes.
2. How to engage parents in goal setting and high value interventions
3. The importance of child-centered therapy within an enriched environment focuses on early motor learning, exploratory play and mastery.
4. Current commercial products, adaptive equipment and assistive technology available to support an enriched environment
Why Early Intervention?

Limited experiences may cause long-term deficits

- Capitalize on increased neural-plasticity during critical period
- Most neural connections are established by 3 years of age
- Sensory motor pathways are established and strengthened through repetition and practice during daily activities and routines
A Multi-Disciplinary Early Intervention Model

Key Elements:
- Shared goal-setting
- Activity-based intervention
- Routine-based practice
- Enriched environment
Evidence-based diagnosis, health care, and rehabilitation for children with cerebral palsy.

Novak I

- A diagnosis is an important step to helping a family access parental support and evidence based information to help their child
- It is ethically prudent to recommend early intervention even if not sure of diagnosis
- Best practice-paradigm: child actively participating in real-life task in real-life environment
- Early environmental and task modification to accommodate disability and promote inclusion and independence
- Manage comorbidities of complex diagnosis
- Services framed by the child and family’s goals are considered best practice and more enjoyable, more effective
Key Concepts Supported by Research:

*Phys Ther.* 2010 Dec;90(12):1868-80.

Opportunities for early intervention based on theory, basic neuroscience, and clinical science.

Ulrich BD

- We are missing the boat on opportunities for infants with motor disabilities.
- Young babies create adaptive, goal-directed movements and demonstrate systematic learning from experiences.
- Change happens with self-organized interaction, goal directed and repetitive actions within context.
- Activity based interventions can be administered by caregivers and guided by therapists.
Key Concepts Supported by Research


**Cerebral palsy--don't delay.**

McIntyre S, Morgan C, Walker K, Novak I.

- It is the responsibility of the health care professional who observed major risk factors or a motor delay to investigate further, diagnose at risk CP early, and refer to early intervention to optimize cognitive function.
- Refer for intervention when an infant is at high risk without a formal diagnosis.
- Delaying diagnosis can worsen parental depression and stress.
- All children with suspected injury should have MRI imaging.
- Qualitative assessment of general movements are predictive of CP. Routinely used neuro observations and standardized developmental tests are not designed to detect CP.
Key Concepts Supported by Research:

* Enriched environments and motor outcomes in cerebral palsy: systematic review and meta-analysis.

Morgan C, Novak I, Badawi N

**Enriched Environment**

- Lack of Definition & Distinguishing Features
  - Environmental enrichment is a widely used term
  - No agreed definition
  - Most authors fail to elucidate elements distinguishing enrichment or environmental enrichment they are applying, making study comparisons difficult

- Brain Plasticity

- Behavior Change: Learning & Memory + Motor Learning

**Key Elements**

1. Animal studies describe key elements of a complex and variable EE
2. Cognitive, Sensory, Social, Motor
3. Motor Component

- Authors conceptualize the motor component of EE differently
- Environment enrichment may promote motor challenge + repetitive training, separate but congruent as a treatment approach
Key Concepts Supported by Research
Optimizing motor learning in infants at high risk of cerebral palsy: a pilot study
Catherine Morgan, Iona Novak, Russell C Dale, and Nadia Badawi

- GAME (Goals- Activity- Motor- Enrichment) appears to offer a promising and feasible new motor intervention for CP.
- Parents coached in simple motor task analysis and appropriate strategies to enhance development and in setting up motor enriched environments
- Favorable short-term motor outcomes were noted in standardized testing of motor ability
- Parents reported improvements in the COPM performance and satisfaction
- Important to monitor parents well-being due to higher depression and anxiety levels more than parents with children without disabilities
Key Concepts Supported by Research

Morgan et al. BMC Neurology 2014, 14:20

GAME (Goals - Activity - Motor Enrichment): protocol of a single blind randomised controlled trial of motor training, parent education and environmental enrichment for infants at high risk of cerebral palsy

Catherine Morgan, Iona Novak, Russell C Dale, Andrea Guzzetta and Nadia Badawi

RCT of a goal driven, motor learning approach with environmental interventions and parent education

- Prechtl’s Qualitative Assessment of General Movements (GMs) has allowed earlier diagnosis of high risk CP at 3 months of age
- Set goals with family, educate parents, enrich the environment
- “standard care”- varied approaches to therapy intervention including neurodevelopmental therapy, developmental skills approach, group therapy or motor learning approaches
- Outcome measures: PDMS-2, GMFM, COPM, AHEMD-IS, DASS, BSID-III
A Multi-Disciplinary Early Intervention Model

Key Elements:
- Shared goal-setting
- Activity-based intervention
- Routine-based practice
- Enriched environment

It takes a team!
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- Neonatologist
- PT
- DI
- OT
- SLP
- Vision specialist
- Orthopedic
- Neurologist
- Social Work
- Parent
- ENT / Nutrition
- Primary Care Physician
- Other care providers
- Rehabilitation doctor
What is the best way to coordinate the multidisciplinary team?

- Determine the primary team (the team that sees the client and family the most, including a social worker)
- Include parents in meetings with team discussing parents priorities and goals (Routine Based Assessments, Circle Conferences)
- Encourage a parent notebook/binder (contact information for the team, educational materials, questions, recommendations)
- Communication with physicians before appointments - make sure you have all necessary releases on front end
- Use Technology: group emails, My Chart, EPIC Care Everywhere
Parent Resource Binder

Educational Topics:
Development
Nutrition
Diagnosis
Role of the Clinician
Multidisciplinary team
Muscle tone
Language development
Sensory Integration
Positioning
Sleep
Financial Resources

Medical Management:
Birth History
Medications
Medical Team
Insurance Information
Appointments
Equipment/Vendor
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EMPOWER PARENTS

Connected
Confident
Advocate
We know that CP results in complex problems

How do we address multiple areas?

- Pain
- Cognition
- Mobility
- Bone development
- Language
- Seizures
- Behavior
- Bowel and Bladder
- Sleep
- Vision
- Nutrition
- Hearing

Novak, April 2014
The Evaluation Process

You are not just evaluating the infant

Not just focusing on your clinical area
The Evaluation Process: Holistic Picture

- General Assessment
  - GMs, TIMP, Peabody, GMFM, PLS, Rosetti

- Ongoing Assessment of the Infant
  - Regular scheduled clinic visit

- Family-Centered Care
  - Routine Based Assessment, paired with COPM
Early Childhood Development Chart

0-3 Months

- Social-Emotional: Smiles and is comforted by mother
- Physical Development: Begins to roll over

3-6 Months

- Social-Emotional: Shows familiar faces
- Physical Development: Sits up with help

6-9 Months

- Social-Emotional: Plays peek-a-boo
- Physical Development: Sits up independently

9-12 Months

- Social-Emotional: Responds to the name
- Physical Development: предпочитает сидеть без поддержки

12-18 Months

- Social-Emotional: Points to objects
- Physical Development: Stands with support

18-24 Months

- Social-Emotional: Eats cereal
- Physical Development: Runs

24-30 Months

- Social-Emotional: Understands simple commands
- Physical Development: Jumps off a short height

30-36 Months

- Social-Emotional: Plays simple games
- Physical Development: Draws shapes

36-42 Months

- Social-Emotional: Uses a spoon
- Physical Development: Rides a tricycle

42-48 Months

- Social-Emotional: Begins to count
- Physical Development: Throws a ball accurately

48-54 Months

- Social-Emotional: Shows simple chore
- Physical Development: Draws a person

54-60 Months

- Social-Emotional: Talks in sentences
- Physical Development: Rides a bike

60-72 Months

- Social-Emotional: Tells about past
- Physical Development: Jumps a distance

Cognitive:

- 0-3 Months: Sees objects
- 3-6 Months: Holds a toy
- 6-9 Months: Grasps objects
- 9-12 Months: Points
- 12-18 Months: Enjoys simple games
- 18-24 Months: Responds to simple commands
- 24-30 Months: Understands simple commands
- 30-36 Months: Uses simple tools
- 36-42 Months: Draws shapes
- 42-48 Months: Writes own name
- 48-54 Months: Uses a pen
- 54-60 Months: Draws with scissors
- 60-72 Months: Writes letters}

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Multidisciplinary Checklist Tools

[Image of Early Childhood Development Chart]

Note: This is a chart of early development milestones for children aged 3 through 72 months. The chart includes guidelines for social-emotional, physical, cognitive, and adaptive development.
Perlman Multidisciplinary Checklist

<table>
<thead>
<tr>
<th>3 Months</th>
<th>6 Months</th>
<th>12 Months</th>
<th>18 Months</th>
<th>24 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mouths hands</td>
<td>Will kick arms and legs to interact with their environment</td>
<td>Visually attends to a picture in a book</td>
<td>Demonstrates uses of every day items</td>
</tr>
<tr>
<td></td>
<td>Looks side to side between two objects</td>
<td>Removes a blanket from their face</td>
<td>Finds object partially hidden/object permanence</td>
<td>Combines two related objects (bowl, spoon)</td>
</tr>
<tr>
<td></td>
<td>Mouths toys</td>
<td>Watches objects fall when dropped</td>
<td>Container play</td>
<td>Looks at pictures with an adult</td>
</tr>
<tr>
<td></td>
<td>Recognizes familiar faces and objects</td>
<td>Recognizes self in mirror</td>
<td></td>
<td>Matches animals to sounds</td>
</tr>
<tr>
<td>Sensory</td>
<td>Tolerates water/bath</td>
<td>Soothes self</td>
<td>Gives hugs and kisses</td>
<td>Can name 5 or more objects</td>
</tr>
<tr>
<td></td>
<td>with parent</td>
<td>Enjoys being held</td>
<td>Shows preferences for certain toy</td>
<td>Pretend play with objects</td>
</tr>
<tr>
<td></td>
<td>Cries with comfort but can sleep for 4-10 hours</td>
<td>Reaches towards adults to interact</td>
<td>Attends to a play for 2-3 minutes</td>
<td>Can match objects to pictures</td>
</tr>
<tr>
<td></td>
<td>Smiles and makes eye contact soothed</td>
<td>Shows preferences to foods</td>
<td>Responds differently to children &amp; adults</td>
<td>Complete simple single piece puzzles</td>
</tr>
<tr>
<td></td>
<td>Startles with loud noises</td>
<td>Tracks toys/focuses on an object 8-10 inches away</td>
<td>Parallel play &amp; brief peer to peer interaction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sleeps 4-10 hours at a time</td>
<td>Sleeps 10-12 hours with waking only once</td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>Latches around nipple when feeding</td>
<td>Lip closure when swallowing/taking purées by mouth</td>
<td>Rotary chew with textured foods</td>
<td>Separates from parent</td>
</tr>
<tr>
<td></td>
<td>Handles liquids without a cough or wet voice quality</td>
<td>Tongue lateralization used when eating</td>
<td>Drinks from a sippy cup</td>
<td>Shows discomfort by a dirty diaper</td>
</tr>
<tr>
<td></td>
<td>Holds an object for 5 seconds</td>
<td>Moves toys between hands</td>
<td>Stories</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lifts and rotates head when being or prone</td>
<td>Self feed bottle</td>
<td>Uses thumb opposition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accidently rolls from tummy to side</td>
<td>Biting grasp present</td>
<td>Points to objects/activates buttons with index finger</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kick legs smoothly while lying supine</td>
<td>Bears full weight equally through legs</td>
<td>Crawls reciprocal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smooth writing movements of arms</td>
<td>Rolls supine to prone and side to side</td>
<td>Walks three or more steps with assistance and crises</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When held in standing legs move reciprocally</td>
<td>Initiates army crawl</td>
<td>Moves from stand to sit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rushes up through extended arms while prone</td>
<td>Transition from floor to sit independently</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beginning to sit with assistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protective extension reaction present when falling forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication/Social</td>
<td>Looks in the direction of their parent talking</td>
<td>Laughs</td>
<td>Follows simple spoken commands (“give daddy the ball”)</td>
<td>Can point to 5 or more pictures of common objects</td>
</tr>
<tr>
<td></td>
<td>Babbling</td>
<td>Responds to name being called</td>
<td>Responds to “where” questions</td>
<td>Can point to 6 body parts</td>
</tr>
<tr>
<td></td>
<td>Different cries for wants and needs</td>
<td>Sound imitation</td>
<td>Says non-prompted greetings</td>
<td>Sings familiar songs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Briefly stops at the word “no”</td>
<td>Asks for help</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Uses simple gestures “up” “bye, bye”</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
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## Parent/Child Assessment of Routines

**Aaron W. Perlman Center: Routine Based Assessment**

<table>
<thead>
<tr>
<th>ROUTINE/ACTIVITY</th>
<th>RESPONSE DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MORNING ROUTINE</td>
<td></td>
</tr>
<tr>
<td>(getting up, getting dressed, do they assist)</td>
<td></td>
</tr>
<tr>
<td>BEDTIME</td>
<td></td>
</tr>
<tr>
<td>(getting ready for bed, going to bed sleeping, how long)</td>
<td></td>
</tr>
<tr>
<td>MEALTIME</td>
<td></td>
</tr>
<tr>
<td>(appetite, level of assistance, how long)</td>
<td></td>
</tr>
<tr>
<td>BATHTIME</td>
<td></td>
</tr>
<tr>
<td>(how do position, likes water)</td>
<td></td>
</tr>
<tr>
<td>PLAYTIME</td>
<td></td>
</tr>
<tr>
<td>(indoor Play, favorite toys/activities, play by selves)</td>
<td></td>
</tr>
<tr>
<td>STORY TIME</td>
<td></td>
</tr>
<tr>
<td>(interested in books, looks at pictures, do you read daily)</td>
<td></td>
</tr>
<tr>
<td>DOMESTIC PLAY</td>
<td></td>
</tr>
</tbody>
</table>

**Child's Name:** ____________________________  **Respondent:** ____________________________  **Date:** ________________
What are the therapy options to meet the above needs?
Bridging the gap between clinical assessments and family need

- Identify Limitations
- Developmental Delays
- Medical needs

- Family Routines
- Family Priorities
- Overcome Barriers and Obstacles
Take a Break

10 minutes
Develop a Therapy Plan

- Considering severity and complexity of diagnosis, delays, parents’ level of education, acceptance and understanding of their child’s diagnosis
- Frequency: Does the child/family need weekly treatment, once per month, or a burst of therapy every couple of months?
- Most supportive environment: group or individual; home-based or clinic-based
- Referrals for specialized intervention (splinting, constraint therapy, adaptive equipment, oral-motor/feeding therapy, vision therapy, Kinesiotherapy, etc.)
Perlman Case Study Examples

Mild delays: Infant has risks for CP

Moderate Delays: Infant presents abnormal motor delays

Severe Delays: Infant presents with significant neuro-motor impairments
Case Studies: Patient Medical History

Mild delays-at-risk

- Full term
- Difficult delivery
- Seizure after delivery
- Abnormal MRI
- Mom has degree in child development

Moderate delays

- Full term
- Seizure activity and HIE following birth
- Abnormal movements of UE/LE
- Abnormal MRI
- Sensory issues
- Feeding difficulty

Severe delays

- Preemie
- Difficult pregnancy
- Ruptured placenta
- Seizures NICU
- Tonic posturing
- Feeding difficulty
- Family lost another child
Mild delays - At Risk
- MRI - basal ganglia
- Clinic check-ups have been on track
- Underlying weakness observed by PT
- Slight catch in Right hamstring
- 1x every 3-4 weeks

Moderate delays
- Presents with tonal posturing
- External support for positioning
- Sensitive to vestibular movement
- Home based EI, OP equipment planning
- Group tx

Severe delays
- Severe posturing
- Feeding/GI issues
- Mom needs lots of support
- Positioning needs
- Medical needs
- 2x week group setting (OT, PT, SLP, SW, MDs, feeding team)
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Role of Clinician

Build high value interventions

Incorporate into daily routines

Enhance parent-child relationship

Foster parent confidence
Specific Strategies:

**Engaging Parents**
- Therapy to support early parent-infant relationships
- Build parent confidence
- Education and training
- Build opportunities for practice
- Incorporate into daily routines

**Building Enriched Environments**
- Adapt access to play, play is FUN!
- Stimulate exploration, inquiry and learning
- Enrich for cognitive, motor, sensory and social development

**Applying Early Motor Learning**
- Goal-oriented intensive motor training (Morgan et al., 2015)
- Build in repetition
- Scaffold so infant is able to complete at least part of the task
- Experience-based activities will engage self-initiation of movement
- Occurs while participating in daily routines (i.e., at the grocery)
Engaging Parents: Education

Topic Lists

Identify parent priorities and begin education based on parents’ perceived need.

- child diagnoses
- gross motor development
- home positioning techniques
-financial resources
- fine motor development
- adapted equipment
- seating and positioning
- patient advocacy
- disabilities across the lifespan
- speech and language
- parent support and resources
- oral-motor and feeding
- sensory integration
- types of rehabilitation therapy
Engaging Parents: Goal Setting

“Nobody understands what I’m going through.”

“How will I pay for my child’s care?”

“I just want my child to walk and talk.”

“I have a hard time connecting with my child.”
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- Educate
- Model
- Engage
- Observe
- Connect
Play must be Purposeful!

Purposeful Play is...

- Goal oriented
- Activity based
- Motivating!
- In an Enriched environment
Play is the answer to how anything new comes about.

- Jean Piaget
Enriched Environment

cognitive
sensory
motor
social
Building Enriched Environments

active exploration
inquiry
learning
Building Enriched Environments

- Is the child positioned within reach to explore the activity?
- Are all senses being utilized?
- Is the child being motivated to move throughout the environment?
- Is the environment adapted to increase access to play?
Can the child have an effect on the activity within the environment?
Is the activity appropriately challenging the child within the environment?
Is the child presented with the need for problem solving?
Building Enriched Environments

- Is the child motivated to repeat the task for motor learning?
- Does the environment support learning? (i.e., appropriate noise level, social motivators, peer groups, developmental learning supports, visual supports, auditory feedback, etc.)
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Bridging the gap between the clinic and the home environment

**Clinic**
- Discipline focused
- Clinic equipment closet
- May have group option

**Home**
- Incorporate into Family Routines
- Functional activities
- High Value
- Adapted environment
Mobility

The average toddler moves 8 out of 10 waking hours/day

Early Literacy

Functional MRIs show positive long-term neuro-cognitive effects of reading to very young infants.

Sensory Motor Learning

Sensory experiences shape a baby’s knowledge about the world

Social Connections
Learning through Experience

Adapting the environment with positioning equipment allows children with disabilities to experience their world and build relationships. Allows the child to participate in typical experiences to foster learning.
Activities need to promote active engagement and allow a child to:

– Actively explore, move and participate in play
– Assist with self-help routines
– Interact and connect with family & friends
– Participate in community activities
– Have a means to effectively communicate
– Make choices about their wants and need
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Alternative & Adaptive Access to Play

- Headpointing painting
- Universal cuffs, large pegs, splints
- Switch toys for art activities/dramatic play-pourer
- Switch computer access- helpkidzlearn.com
- Fischer Price game with keyboard binder switch
- Walking in different textures while in standers and walkers
- Cameramouse.org with dwell click
- Partner assisted scanning
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Change the environment; Not the body
Adaptations will be critical for success

Gross Motor

Fine Motor

Social

Communication
Consider Communication

Young children need a reliable form of communication as early as possible. Augmentative Communication is shown to support verbal skills and enhance lives of birth to three children and their families. (*Romski, et al., 2015*)

“Communication is a skill that you can learn. It’s like riding a bicycle or typing. If you’re willing to work at it, you can rapidly improve the quality of every part of your life.”

BRIAN TRACY
Holistic approach to AAC intervention should:

- Build on individual **strengths**
- Focus on participation in **real-world contexts**
- Address psychosocial factors (ie., **motivation**, attitude, confidence, resilience)
- Focus on **environmental factors** to reduce barriers and maximize social supports

In the absence of a holistic approach to communication, a child is at risk for failing to engage in social contexts beyond their immediate family or educational/vocational personnel. (Light and Mcnaughton, 2015)
There is more than one way. Hands Free Matters!
Should I get a gait trainer if they are going to walk? **YES!**

Are they too young for power? **NO!!**
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Sensory Motor Learning
Social Connection
Perlman defines **functional positioning**:  

- Positioning which promotes **active movement** and **participation** and provides an opportunity to positively impact **cognitive function**.  
- Equipment should promote function and participation across the lifespan
Principles of seating and positioning

- Obtain a stable base of support
- Decrease the influence of atypical muscle tone
- Accommodate fixed deformities and correct flexible deformities
- Provide the least amount of intervention needed to achieve the greatest level of function
- There is no one solution or product, but typically a combination of tools that provide success

Adapted from Radell (1997) and York and Weimann (1991)
Key Positioning Components

| Developmental Positioning | • Postural Control, Strengthening  
|                          | • Range of Motion, Weight Bearing  
|                          | • Home *Activity* Programs        |
| Upright Positioning      | • ADLs-Play, Feeding, Bathing, Sleeping  
|                          | • Computer Access/AAC-Integrated Technology  
|                          | • Vision, Sensory Processing, Participation |
| “Total” Mobility         | • EARLY MOBILITY- developmental sequence  
|                          | • Gait Trainer, Stander &/ or Wheelchair  
|                          | • Manual wheelchair vs Power Mobility- BOTH?  
|                          | • Recreational                     |
| Transfers & Transportation| • Body Mechanics, Hoyer Lifts, Overhead Systems  
|                          | • Car Seat &/or Tie Downs          
|                          | • Adapted Van/Ramps                |
Equipment Plan of Care

**Birth to Three**
- Adapting baby equipment
- Floor Play
- Stander/Walker
- Bath Seat
- Car Seat
- Braces
- Seating for Function
- Early ACCESS
- Wheelchair
- Bed Positioning
- Bike & Swing

**Preschool**
- Stander
- Walker
- Braces
- Bath Seat
- Potty Seat
- Wheelchair
- Hi/Lo seating
- AAC/Access
- Adapted Bed
- Car Seat
- Transportation
- Recreation/HEP

**School-Age to Adult**
- Wheelchair
- AAC/ACCESS
- Integrated AT
- Hi/lo chair
- Stander/walker
- Bath chair
- Potty chair
- Adapted Bed
- Car Seat/Van
- Home mods/lifts
- Leisure/Work
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Commercial Products

strollers, car seats, cribs, bath seats, high chairs
playpen, infant swings, floor mats, nursing pillow, ExerSaucers
Pool noodles
Snug and Go
Crib Wedges
Bed table/art desk
Laundry baskets
Inflatable bathtub
Inflatable infant pools
Boxes/stools
Laundry basket: $4.00
Pool Noodle x 2: $3.00
Floor sitter/bath support: $7.00

Table (BLACK): $8.00
Garbage can: $6.00
Large pool noodle: $3.00
Stander with anterior support and Visual adaptation: $17.00
Adapted Equipment

Early Literacy:
- Picture symbols
- Voice output switches
- Adapted books

Sensory tools:
- vibration
- Compression garments
- NUK brushes
- Z Vibe
- Modified utensils
- Swings
- Weight
- Head phones

Positioning:
- Neck supports
- Bracing
- Bobby pillow/U cushion
- Benches
- Fireflyfriends.com:
  - PlayPaK
  - Upsee
  - Go To Seat

Complex Rehab Equipment:
- Standers
- Gait trainers
- Bath Support
- Car seat
- Seating
- Feeding tools
- AAC

Adapted Equipment
You got this, baby! Now… Questions??
Hands on Equipment Demonstration

LET’S PLAY!!
References


References