The When, Why, and How of Pediatric Powered Mobility

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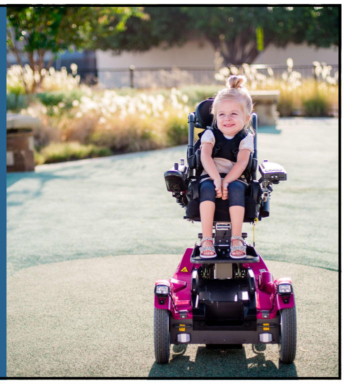

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Continuing Education Credits: 0.2 CEU (2 hour)

AOTA approvals

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On-Site CEU/CCU Assessments
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By the end of the presentation, participants will be able to:

01
Describe three aspects of development that are positively influenced by a child's ability to participate in self-directed mobility

02
Describe two differences in the approach to power mobility seating and operation when considering for early intervention vs. functional mobility

03
Identify two common reservations parents/caregivers have when faced with power mobility device interventions and a potential strategy to address each reservation

04
Demonstrate three training strategies that can be utilized when initiating power mobility with the pediatric population

05
Identify two objective tests and measures that can be utilized to support justification for power mobility in the pediatric population

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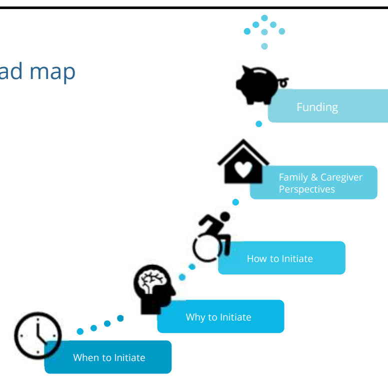
Course road map



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Pediatric powered mobility

"Promotes developmental change and independent mobility"	Body Functions & Structures Activities
"Enhances social relationships and engagement in life experiences"	Participation
"Power mobility access/use is influenced by factors in the physical, social, and attitudinal environment"	Environmental Factors

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(Livingstone & Field, 2015)

When?

2 years
3 months

"Average age at which respondents [therapists] considered power mobility for children"

(Kenyon, Jones, Livingstone, Breaux, Tsotsoros, & Williams, 2018)

7%

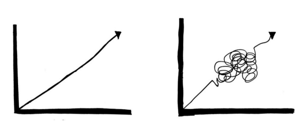
Considered introducing powered mobility before 24 months

(Dugan, Campbell, & Wilcox, 2006)

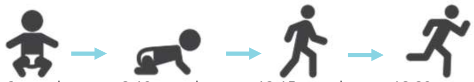
If not then when?

"Is there a "window of opportunity" for influencing overall development in children with mobility limitations?"

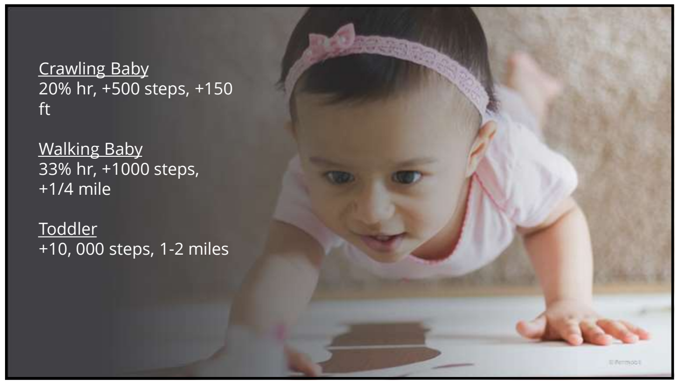
(Livingstone & Field, 2014)



Typical development



4-6 months → 8-10 months → 12-15 months → 18-20 months



Crawling Baby
20% hr, +500 steps, +150 ft

Walking Baby
33% hr, +1000 steps, +1/4 mile

Toddler
+10, 000 steps, 1-2 miles

On-time Mobility

> "To ensure acquisition of exploratory experience as closely as children with typical development (TD), proponents of PMDs for very young children have presented several compelling reasons for introducing power mobility training to children when children with TD engage in independent mobility"

(Huang, 2018, p. 2)

On-Time mobility

When mobility impairments lead to less participation between a child, their peers, and their family, alternatives should be considered

Evidence on early powered mobility:

- 7 months (Lynch et al., 2009)
- 14-30 months (Jones et al., 2012)

Power Mobility Training for a 7-month-old Infant with Spina Bifida

(Lynch et al., 2009)

- Case report
- At conclusion of study:
  - Improvement in all driving variables
  - Increase in Bayley III cognition and language scores at a rate greater than his chronological age

Meet Andrew

Trial #1, 7 Months

Trial #2, 7 Months

Effects of Power Wheelchairs on the Development and Function of Young Children with Severe Motor Impairments

(Jones et al., 2012)

- Randomized controlled trial
- 28 children, ages 14-30 months
- At conclusion of 12 months, significant improvement in experimental group over the control group in:
  - Battelle Developmental Inventory (BDI):
    - Receptive communication scores
  - Pediatric Evaluation of Disability Inventory (PEDI):
    - Mobility functional skills
    - Mobility caregiver assistance
    - Selfcare caregiver assistance
- Time to become proficient in PWC use varied from 12 weeks to 42 weeks

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Who can benefit from powered mobility?

- Children who will never ambulate
- Children with inefficient mobility
- Children who will lose or have lost the ability to walk or walk efficiently
- Children who need mobility assistance in early childhood and will likely progress to independent mobility

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(Wright-Ott, 2015)

Try it!

Studies indicate age and IQ are not necessarily good indicators of ability to operate a power wheelchair (Mockler et al., 2017; Rousseau-Harrison & Rochette, 2013)

Don't focus on readiness skills or pass/fail tests, explore early when they are ready to learn and "set up an environment to facilitate independent learning and exploration" (Livingstone, 2010)

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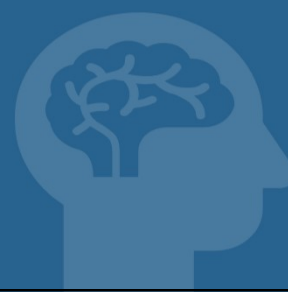
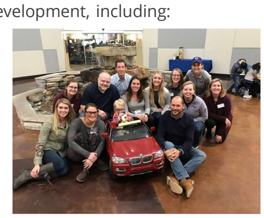
Why?



Self-initiated mobility is imperative for development!

Self-initiated mobility is linked to overall development, including:

Visual Skills
Cognitive Skills
Social Skills
Social Participation
Perceptual Skills
Language Development
Independence
(Rosen et al., 2018)



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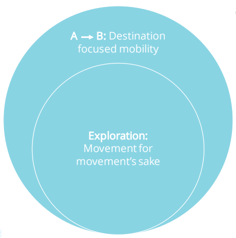
Purpose of mobility



Older Child

As a child ages and experiences increased independence over where they go, destination focused mobility may become more important (Bray et al., 2020)

Birth

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Motor development

Simply put, motor development is the change in motor behavior over time and changes result from an interaction of biological and environmental factors.
(Cech & Martin, 2012)

Like mobility, motor development includes the evolution from reflexive motor actions to purposeful, goal-directed ones.
(Hallemans, 2020)

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Age is not the key factor in motor development

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Motor Development Theories

Neuromaturational

McGraw and Breeze (1941)

Dynamic Systems Theory

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Neuromaturational Theory

As the nervous system matures, stages of motor development progress

Focus is on the child and the child's nervous system

The environment support the child, but does not alter development
(Palisano et al., 2016)

Child, their nervous system over time, stages of motor development →

E N V I R O N M E N T

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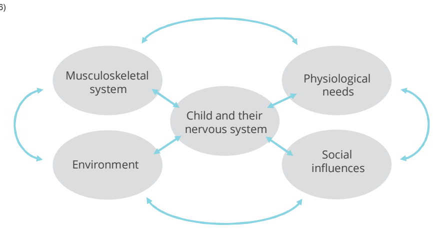
Dynamic Systems Theory

No primary driver, multiple systems interacting to allow for development
(Palisano et al., 2016)



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Development Is a dynamic process!

Factors external to the nervous system:

Anthropometrics, body mass, and nutrition

Musculoskeletal system factors

Cultural differences/influences on motor skill development

Task Demands

Factors related to the nervous system:

Cognitive and behavioural factors

Sensory Factors

- Vision
- Vestibular
- Somatosensory

(Palisano et al., 2016)

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Motor control

Motor control is the physiological process whereby motor development occurs

Multiple variables contribute to the initiate and execute a movement

A significant amount of research exists to support motor control as it pertains to **postural control**, **reaching**, and locomotion

(Palisano et al., 2016)

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Posture = Interface between perception and action

Perception (Sensory Input)

- Vision
- Somatosensory
- Vestibular

→ Posture ↔

Action (Motor Output)

- Active Pelvis
- Reach
- Grasp

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Sensory input

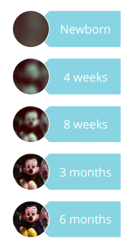
Vision

Somatosensory

Vestibular

At around the age of 6 months, we begin to see rapid improvements in acuity and development of accommodation and binocular vision

First 5 years is a sensitive period of visual development. The visual system is plastic and capable of developing normally



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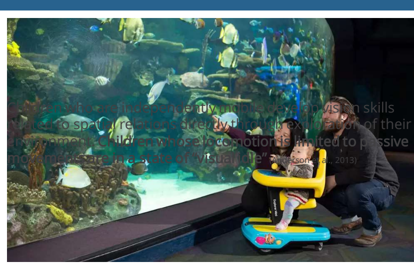
(Plummer, Yampolsky, Meyer, 2009, ISS Pre-Conference; Scheimen, 2011)

Sensory input

Vision

Somatosensory

Vestibular



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Sensory input

Vision

Somatosensory

Vestibular

Collects information from the skin, muscle, and joints

Provide information on skin surface (touch)

Where the body is in space (proprioception)

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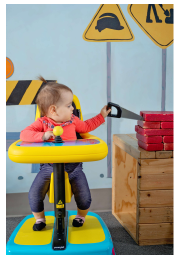
Sensory input

- Vision
- Somatosensory
- Vestibular

Provides sensory input for the motor system to control and coordinate action

The nervous system organizes postural control with the help of synergies that are "fine-tuned" to task-specific conditions



Sensory input

- Vision
- Somatosensory
- Vestibular

Contributes to balance and spatial orientation

Provides the dominate input about movement and sense of balance

Vestibular system send signals to neural structures that control our eye movement and to our postural muscles

- Provides anatomical basis for vestibulo-ocular reflex (Highstein, Faye, Popper, 2004)

Adapted from Plummer, T Sept 2019.

Motor output

- Active Pelvis
- Reach
- Grasp

Postural control begins at the pelvis:

- Anterior/posterior weight shifting
- Lateral weight shifting

Lower body stability

Upper body mobility

- ITs and femur stability allows for spinal rotation

Motor output

- Active Pelvis
- Reach
- Grasp

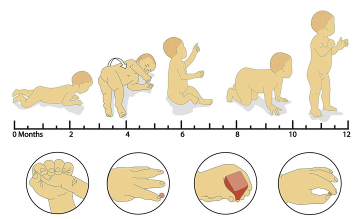


FIG. 3.1 Developmental timeline for several gross and fine motor milestones. (Drawing courtesy Ricardo Solis, Costa Rica.)

Motor output

- Active Pelvis
- Reach
- Grasp

As soon as reaching results in successful grasping, it is accompanied by direction-specific postural adjustments (Van der Fits et al., 1999)

A more erect or slightly tilted forward position may better facilitate reach/ grasp and allow one to practice active postural control (Westcott & Burtner, 2004)

Bringing it all together

Perception (Sensory Input) →	Posture ↔	Action (Motor Output)
Visual information leads to direction specific movements	Postural stability leads to distal mobility and is motivated by reaching	Reaching results in successful grasp, accompanied by direction-specific postural adjustments (Van der Fits et al., 1999)
Touch, proprioception	Nervous System organizes postural control with the help of synergies	Postural control provides a foundation for distal mobility/interaction with the environment

(Plummer, Yampolsky, Meyer, 2009 ISS Pre-Conference)

Considerations for power mobility

Taking what we know about development, where does power mobility come in?

What mobility base, drive control, and seating components are most appropriate?



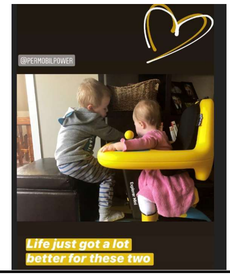
Considerations for infants/young toddlers

Primary goal:

- Exploration, movement for movement's sake (Bray et al., 2020)

Considerations for device:

- Seating
- Drive control



So, what does all this mean for the mobility device?

The child must have opportunities for sensory input that positively influences posture and leads to motor output

Seating considerations include:

- Allow for peri-personal visual observation
- Allowing for movement
- Achieving supported functional seating
- Upper extremity support/function
- Drive control type and location

Seating: supported functional sitting

- Wide base of support
- Feet in weightbearing
- Upper extremity support
- Neutral or slightly anterior pelvic tilt
- Neutral hip flexion angle
- Vertical alignment of the upper body

(Creel, Adler, Tipton-Burton, & Lillie, 2001; Perry, 1998)

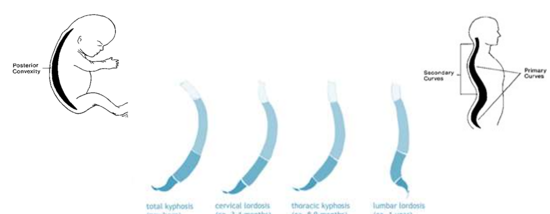
Adapted from Plummer, T Sept 2019.

Seating considerations

Pelvic development:

- Fusion of the pelvic bones (ischium, pubis, illium) does not occur until teen years
- Abnormal growth/development impacts shape and depth of acetabulum
- Children sit with more external rotation and abduction
- Forcing into adduction may result in hip dislocation
- Pelvis is susceptible to high forces which may result in permanent bony changes as the child grows/develops

Development of spinal curves



Development of spinal curves

Lumbar lordosis
- 8-18 months
- Onset of weight bearing and walking
- Younger children: don't expect a lumbar curve
- Functional anatomy: lumbar lordosis in standing, not seated! (Bassett, 2012)

Drive control

Mulitmodal Exploration

- Object shape is available visually, orally, and through touch
- Color and Pattern only visually
- Acting on objects and object attention and exploration occur at 6 months of age (Needham, Barrett, Peterman, 2002)

Eye hand coordination is bimanual at young age and should be facilitated throughout the 6-36 months

Consider joystick over switches for the above reasons, particularly if device being used as a therapeutic tool

Meet Clive

Clive

Clive is 23 months old

Diagnosed with Congenital Muscular Dystrophy at 6 months of age

Uses a variety of wheeled mobility solutions

Clive is "full of life and everyone just loves him"

Ready to go!

PTs encourage an adaptable stroller, but parents knew he needed to move himself

Clive demonstrated potential for power mobility almost immediately

What's next for Clive?

Just received approval for a pediatric power wheelchair

Clive will also be obtaining a pediatric manual ultralight weight wheelchair for transportation/school while he is still driving to learn in his power chair

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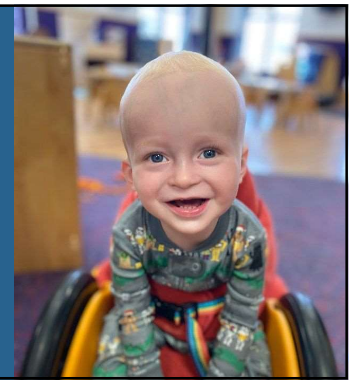
Family advocacy

Clive doesn't want to sit on the sidelines

Mom utilizes social media platform and helps other parents and kids who feel power mobility is overwhelming

"Getting around on his own has changed his life"



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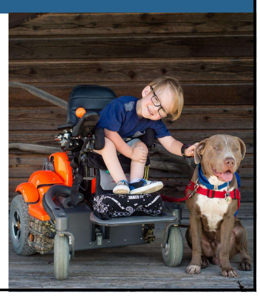
Considerations For the older child

Primary goal:

- Depending on age, may be shifting more towards destination focused mobility (Bray et al., 2020)

Considerations for device:

- Seating
- Drive control



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Seating

Depending on the age of the child and the intended use of the mobility solution they may transition into more supportive seating

Power seat functions

Additional postural supports

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Seating, continued

As a child starts to be age-appropriate for self-transfers, consider seat to floor height

Planar vs contoured seating

Accommodating growth, specifically in length but keep the back & pelvic supports

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Seating, continued

Be considerate of arm rest and joystick placement adjustment

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Drive control

What works best for the goal(s) of the device?

If the focus is shifting from exploration and development towards destination focused mobility, need to consider what type of drive control will be most efficient and reliable

Meet Charlie

Charlie's story

Charlie and continued proportional input evaluation

Ultimately, the decision was made to use a switched input device, at least initially

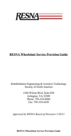
How?

Necessity of training

UN Convention on the Rights of Persons with Disabilities 2016, article 20 – "Ensure…access to necessary personal mobility aids…to enhance the autonomy of persons with disabilities…[and] training…including children…on mobility skills."

RESNA Wheelchair Service Provision Guidelines – Not just wheelchair skills

(Arledge et al., 2011)



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In addition to wheelchair skills

Training should also focus on:

- Training in set-up of seating system, impact on skin integrity, posture, & function
- Wheelchair parts management
- Equipment maintenance, follow-up, & repair
- Integration of the wheelchair into the client's lifestyle (Arledge et al., 2011)

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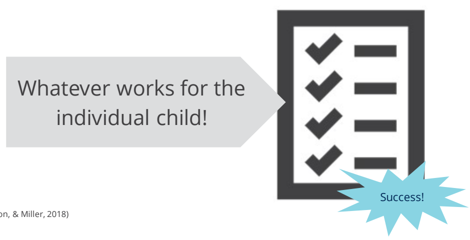
Recipe for success



(Kenyon, Mortenson, & Miller, 2018)

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Common themes

Occurs over time

Should involve all key players

Highly emotional process

Patience, perseverance, and determination are key!

(Kenyon, Mortenson, & Miller, 2018)

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Occurs over time

Literature tells us….

6 weeks → 1 year+

…to become proficient

(Jones et al, 2003; Jones et al, 2012; Kenyon, Mortenson, & Miller, 2018)

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Time spent practicing powered mobility

5.2 hours per week to 1.68 hours per day

(Jones et al, 2003; Jones et al, 2012)

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Time spent "practicing" in typically developing children

6 hours per day

(Adolph et al., 2003)

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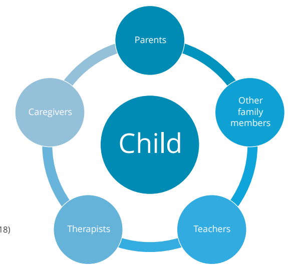
Involve all key players



(Kenyon, Mortenson, & Miller, 2018)

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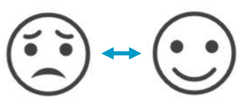
Highly emotional

Tension between child's newfound independence and parental loss of control
Best and worst day
Change in perception of the child by family and friends
Uncertainty
Anxiety

Child may experience:
- Excitement, joy pride
- Frustration, anxiety, despair
- Create a safe space for the child



(Kenyon, Mortenson, & Miller, 2018)

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Special considerations for progressive diagnoses

The need for a power wheelchair may be seen as a continued loss of independence

(Kenyon, Mortenson, & Miller, 2018)

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Patience, perseverance, and determination

Patience
- Parents and therapists with child
- Parents with therapists
- Therapists with parents

Perseverance
Determination

(Kenyon, Mortenson, & Miller, 2018)

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Points during the learning process

- Joy of movement
- Cause and effect
- Developing a sense of purposeful movement
- Driving in the real world
- Responding to multiple attentional demands

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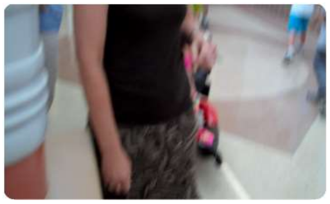
(Kenyon, Mortenson, & Miller, 2018)

For example…



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Driving to Learn: 8 Phases of Learning

PHASES	Activity & Movement	Understanding of Tool Use	Expressions & Emotions	Interaction & Communication	STAGE
1 Novice	Excited, non-act, rejection	No or vague idea of use	Open Neutral Anxious	No response / avoidance	Explore **FUNCTIONS** Body & tool/s
2 Curious Novice	Pre-act	Idea of basic use is born	Contented Curious Anxious Angry	Responds to interactions	
3 Beginner	Act	Basic use	Serious Contented Smile	Initiates interactions	

(Nilsson & Durkin, 2014)

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Driving to Learn: 8 Phases of Learning

PHASES	Activity & Movement	Understanding of Tool Use	Expressions & Emotions	Interaction & Communication	STAGE
4 Advanced Beginner	Chains of acts	Exploration of extended use	Serious Smile Sometimes laugh	Mutual Interaction	Explore **SEQUENCING** Body, tool/s & environment
5 Sophisticated Beginner	Sequences of acts	Idea of competent use is born	Eager Smile Serious Frustration	Reciprocated interaction Triadic interaction	

(Nilsson & Durkin, 2014)

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Driving to Learn: 8 Phases of Learning

PHASES	Activity & Movement	Understanding of Tool Use	Expressions & Emotions	Interaction & Communication	STAGE
6 Competent	Activity	Competent use of tool	Serious Content Laugh Excited	Consecutive interactions	Explore **PERFORMANCE** Body, tool/s, environment & occupation
7 Proficient	Occupation for its own sake	Fluent precise use of tool	Happiness Satisfaction	Concurrent interactions	
8 Expert	Occupation, composed of two or more activities	Integrated tool use	Dependent on the doing of 'other' activities	Multi-level integrated interaction	

(Nilsson & Durkin, 2014)

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Role of the adult

Responsive partner (Durkin, 2006)

Encourage exploration

Organize the environment for promotion of independence and socialization (Huang, 2018)

Adult = Provide an environment from which to learn

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Common training approaches

1. Incorporation of play
2. Virtual reality and computer-based gaming
3. Technology-augmented power mobility devices
4. Natural environments
5. Goal directed mobility
6. Self-exploration
7. Skills-based programs

(Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)

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(Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)

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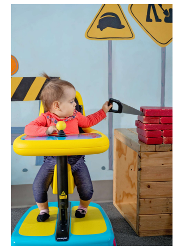
1. Incorporation of play

Most common approach, present in 48.2% of studies

Examples include:

- Knocking over boxes
- Hide and seek
- Follow the leader
- Red Light/Green Light
- Tag
- Bubble wrap
- Streamers

(Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)



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4. Natural environments

Used in 37% of studies

Natural environments included:

- Home
- School
- Daycare
- Community settings

May allow for more opportunities for practice

May provide more opportunities for socialization/peer interaction

permobil (Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)

5. Goal-directed mobility

- Used in 33% of studies
- Children are their own change agent!
- They need motivation to act
- Children go to something, not away from something
  - ~~"Go over here"~~
  - "Come get your toy!"

(Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)

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6. Self-exploration

Used in 25.9% of studies

Allowing children to go where they want and do what they want

- Consistent with exploration in typical development/locomotion

(Kenyon, Hostnik, McElroy, Peterson, & Farris, 2018)

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Instructions for training a young child

Young children in power wheelchairs *must be* supervised at all times. Adults should be close by to monitor all activities and to ensure safety.

Do:

1. Encourage your child to explore the joystick first, then the movement, then the environment. Let the child learn by doing, giving the child time to learn and react.
2. Provide positive feedback (eg, "You found the ______ [object your child ran into]" rather than "Oops, you crashed").
3. Give your child time to figure out a situation before intervening. If your child looks distressed, then intervene immediately.
4. Help your child by using only words such as "come closer," "turn," "go back," "lift your hand off," or "let's go for a walk," rather than "push the joystick and come here" or "press the yellow button and go forward, turn left, go in reverse, and stop."

Do Not:

1. Expect your child to learn how to functionally operate and maneuver the device within a day or week. This is a gradual learning experience. The goal is not to move accurately at first, but rather to give your child a tool to begin moving, exploring, discovering, and problem solving at his or her own speed. The process should be enjoyable and rewarding.
2. Say anything that sounds negative (eg, "You crashed into the wall again" or "You're going the wrong way").
3. Describe how to move by using directionality commands (eg, "Turn this way," "Come here," "Press the colored button," "Turn right or left"). All of these directions sound like commands, and many children will resist this type of interaction.

(Modified from Wright-Ott (1997), in Jones et al., 2003)

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Strategies for maximizing safety

Remote stop
Attendant emergency stop
Set-up no drive profiles
Lock the joystick
Foot bumper

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Frequency and duration of training

Varies significantly from study to study

- 60 minutes, 1x/week for 12 weeks (Kenyon, Farris, Gallagher, Hammond, Webster & Aldrich, 2017)
- 3-4x/week for 4 months (Lynch, Ryu, Agrawal, & Galloway, 2009)
- Average of 5.2 hours/week for 12 months (Jones, McEwen, & Neas, 2012)
- Average of 1.68 hours/day for 6 weeks (Jones, McEwen, & Hansen, 2003)

Take home message:

- Appears that more frequent experiences may lead to quicker learning
- Consider how frequently and for how long typically developing children "practice" mobility

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Goal setting

Within a 6-week timeframe, client will be able to:

- "Demonstrate intentional activation of a switch to move the power mobility device in any direction"
- "Move the power mobility device in the general direction of preferred objects/individuals"
- "Purposefully stop the power mobility device in response to verbal or environmental cues"

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(Kenyon et al., 2017, p. 26)

Measures

Measure	Format	Brief Description
Assessment of Learning Powered Mobility Use	Performance/Observational http://www.lisbethnilsson.se/en/	• Assesses the learners actual understanding of how to use the device • 3 stages, 8 phases • Outcome from different sessions can be compared to show changes in behavior and progress in learning tool use • Also includes ideas for how to facilitate progress
Canadian Occupational Performance Measure (COPM)	Self-reported measure	• Personalized goal setting • Tracks perception of occupational performance over time based on set goals
Matching Assistive Technology and Child (MATCH) survey		• "**Child-centered assessment** with a focus on matching child to technology based on needs assessment (related to IEP), child predisposition, environmental factors, and product features matched to child's needs."

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Measures

Measure	Format	Brief Description
Pediatric Evaluation of Disability Inventory (PEDI)	Performance measure, self-reported measure or combination of both	•Measures functional status in self-care, mobility, and social function •Three parts: Functional skills, caregiver assist, and modifications
Pediatric Power Wheelchair Screening Test (PPWST)	Performance measure	• Tracks changes in performance over time • Consists of items under three sections: Basic Mobility Skills, Integration of Basic Skills for Functional Mobility – Structured Environment, and Integration of Basic Skills for Functional Mobility – Unstructured Environment
Power Mobility Training Tool (PMTT)	Performance measure	• 12 items scored on a 5-point scale, 1 non-scored item, 2 items scored dichotomously • Non-motor and motor items • Findings used to create child-centered goals for powered mobility training

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Measures

Measure	Format	Brief Description
Wheelchair Outcome Measure – Young People (WhOM-YP)	Self-reported measure	• Two-part questionnaire, including a semi-structured interview and structured questions to address client's satisfaction with comfort, positioning and skin breakdown • For individuals 18 years and younger and/or for parents or others that support them
Wheelchair Skills Checklist	Performance measure	• 7 item checklist that may be used to predict proficient power mobility use
Wheelchair Skills Test - Power	Performance measure Self-reported version available	• 25 item objective measure of wheelchair performance, rate on a scale of 0-3 (fail, partial pass, pass, advanced pass) • Questionnaire version as well • Tracks change over time

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Family and Caregiver Perspectives

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Parental stress

Parental stress and negative emotions can be higher when caring for a child with severe physical disabilities

- Powered mobility (Teft et al., 2011):
  - Parents reported a lower perceived level of stress at time of wheelchair delivery
  - No decrease in negative emotions

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Parents hesitant at first

Once powered mobility initiated, more positive feelings

Importance of emphasizing the possibility of increased independence, participation, and socialization!

(Wiart et al, 2004)

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Added burden if not independent

In Jones et al (2011) study, once powered mobility was initiated parents reported having to provide supervision more consistent with children of the same age that are typically developing

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Equipment specific concerns

- Weight
- Size (Teft et al., 2011)
- Adjustments (Teft et al., 2011)
- Durability

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Funding

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Funding

Address the following proactively in justification:

- Age of child
- Why dependent mobility is not appropriate
- Child demonstrates the capability of independence
- Age-appropriate supervision
- Photos/Videos if funding source will accept!

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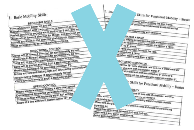
A note about pre-requisite skills

Remember, drive to learn!

Research supports the fact that requiring certain "pre-requisites" to qualify for a power wheelchair delays children from having access to the equipment required to aid in their development



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Dependent mobility = not appropriate

Available evidence on early childhood development suggests a relationship between self-initiated mobility and development of social interaction, visual perceptual skills, visual ability, and communication (Campos et al., 2000). Furthermore, multiple studies support a correlation between self-initiated mobility and overall development including visual, cognitive, social, perceptual, and language development – and ultimately – independence (Rosen et al, 2018).

By providing only a stroller, and not giving this child his right of self-directed mobility, he is at increased risk of developmental delays as compared to his age matched peers who are able to ambulate independently.

One of the purposes of State Medicaid programs is to help a recipient attain the capability of independence, 42 U.S.C. § 1396.

- The Koala fits within individual needs, including independence, posture, and positioning parameters
- The denial of a prescribed, medically necessary power wheelchair that permits the beneficiary to be independently mobile (with age-appropriate supervision), and decrease dependence on others to function, is a travesty
- By denying the power wheelchair this agency is creating additional obstacles and in turn promoting an atmosphere of learned helplessness
- Language within 42 U.S.C. § 1396 also states that services will be "provided in a manner consistent with simplicity of administration **and the best interest of the recipients**"
- Dependent mobility for a developing child is not in the best interest of the child as referenced above

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Age

- Research has shown that children as young as 7 months of age have been successful at self-directed mobility in a power mobility device with age-appropriate supervision (Lynch et al, 2009)
- In a randomized controlled study by Jones et al (2012), it was concluded that results of the study "support use of power wheelchairs with children as young as 14 months of age to enhance development and function."
- The *RESNA Position on the Application of Power Mobility Devices for Pediatric Users* (Rosen et al, 2018, p. 2), states: "It is RESNA's (Rehabilitation Engineering & Assistive Technology Society of North America) position that **age,** limited vision, behavioural issues…**should not, in and of themselves, be used as discriminatory factors against providing power mobility for children."**
- This child, through trial of the powered mobility device, has shown the capability of independence with age-appropriate supervision

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Independent with age-appropriate supervision

Consider what might happen when a typically developing 6-month, 12 month, or 24-month-old is left alone!

Same goes for children using powered mobility devices

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Funding successes

Medicaid
Private insurance
Fundraising
Associations
Self-pay
HSA

Explorer Mini: Consider billing as activity chair or power chair, it has been funded under both!

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Alternate funding resources

General

Assistive Technology Funding Resource Guide: atia.org/at-resources/what-is-at/resources-funding-guide
Permobil Foundation: permobilfoundation.org
Vocational Rehabilitation Services: disability.gov/resource/vocational-rehabilitation-state-offices
eSpecial Needs Funding Resource Links: especialneeds.com/funding

Crowd Funding with 503c

Help, Hope, Live: helphopelive.org
MedGift: medgift.com

State Specific

Crime Victim's Compensation: nacvcb.org/index.asp?sid=6
Easter Seals: easterseals.com
State Client Assistant Program (CAP) through National Disability Rights Network: ndrn.org/en/ndrn-member-agencies.html
Midwest Special Needs Trust: midwestspecialneedstrust.org/charitable-program/about
AL Head Injury Foundation: ahif.org/services.html
CA (San Diego) through Sharp Rehab: sharp.com/services/rehab/spinal-cord-injury.cfm
DE (NJ & PA also) Adam Taliaferro Foundation: taliaferrofoundation.org
GA Brain & Spinal Cord Injury Trust Fund: bsitf.georgia.gov
FL Brain & Spinal Cord Injury Trust Fund: floridahealth.gov/diseases-and-conditions/brain-and-spinal-cord-injuries/index.html
IL University of Illinois at Chicago Specialized Care for Children: dscc.uic.edu
LA Traumatic Head & SCI Trust Fund: ldh.la.gov/index.cfm/page/126
MI Children's with Special Needs Fund: michigan.gov/csnfund/0,4553,7-156-56072---,00.html
MS Paralysis Association: msparalysis.org/what-we-do
NH Harry Gregg Foundation: crotchedmountain.org/programs-and-services/harry-gregg-foundation
OH Building Blocks for Kids: bb4k.org

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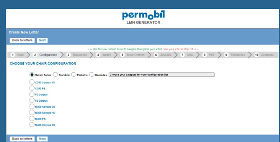
We Are Here to Help!



Website: www.permobilus.com
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Questions?

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Online Assessment Information

Continuing Education Sign-in / Sign-out Sheet

All attendees must sign in/out using QR code or bitly link

Online CEU Assessment

Failure to complete will result in NO CEU certificate/credit being issued

On-Site CEU/CCU Assessments

Complete course assessment survey to obtain CEU credits.

On-Site CEU/CCU Assessment

To take the CEU assessment:

http://permobil.com
Click on Education
Click on Education (again)
Click on On-Site CEU/CCU Assessments
2 week survey deadline from today

Thank you!

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