

# **The Role of Physical Therapy with Assistive Technology (AT)**

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## Today's objectives:

- To develop an understanding of physical therapy's role with AT
- To understand the PT decision-making process regarding AT for students
- To understand how AT is documented in the IEP by physical therapy
- To understand how AT is supported by PT as part of a student's IEP

# How IDEA 2004 defines AT devices

- ...any item, piece of equipment or product system, whether acquired commercially or off the shelf, modified, or customized that is used to increase, maintain or improve the functional capabilities of a child with a disability.
  - Section 300.5 of Part B

# How IDEA 2004 defines AT services

- ...any service that directly assists an infant or toddler or a child with a disability in the selection, acquisition, or use of an assistive technology device...
  - Sec. 303.13(b)(1)(ii)(a-f) of Part C and Sec. 300.6 of Part B

## **From a PT perspective, what is the purpose of AT?**

- To adapt environments to facilitate student access to and participation in school activities and routines

# Why use a device?

## Environmental support for learning

- External support in the form of adaptive equipment may allow a child to maintain a position necessary for practicing a motor skill
- This support reduces the degrees of freedom the child needs to control, and makes the task possible

## So....what does that mean?

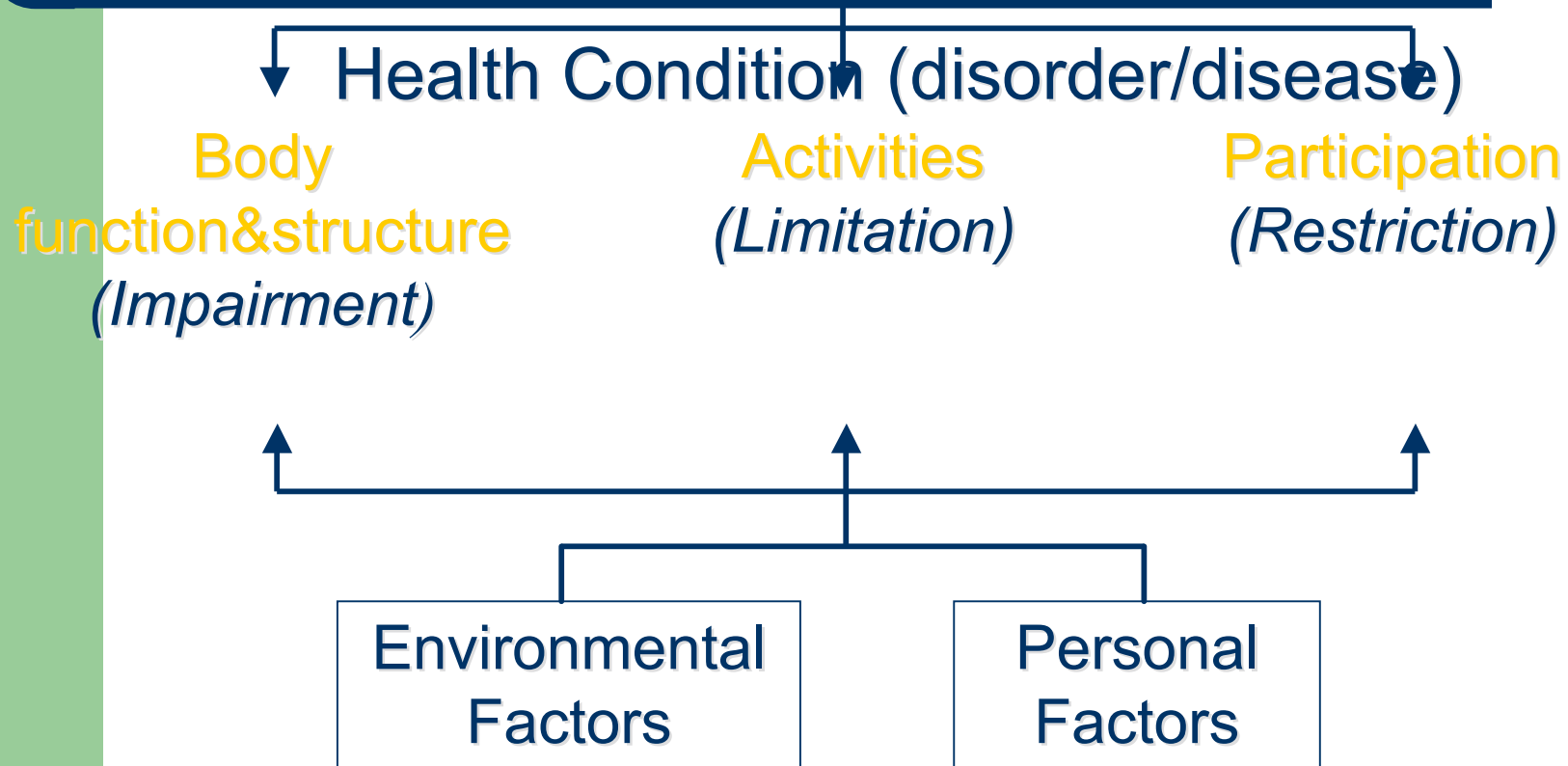
- To promote appropriate positioning strategies both for the student and the devices
- To provide mobility alternatives
- To assist the team in identifying movement patterns to facilitate student use of AT devices
- To assist the team in determining what device is the “best match” for the student’s movement patterns
- To assist the team in developing strategies for implementation of all AT devices and strategies

# How PTs make decisions about the use of AT

- SETT
  - Student, environment, task, tools
- Assessment tools used
  - Environmentally referenced observation
    - Includes supports in place
      - Are they working?
- Data collection
- Record Reviews
- Teacher Interviews



# International Classification of Function The Decision making Framework



# Assessment Methodology

Purpose	Traditional	Contemporary
<b>Method</b>	<p>To determine what is needed to remediate the disability</p> <p>Test scores</p> <p>Discrepancy model</p> <p>Diagnosis driven</p>	<p>To determine what is needed to help the student attain educational goals/objectives</p> <p>Ecological (environmental)</p> <p>Identification of supports and interferences to specific tasks, expectations</p> <p>Collaborative decision making</p>
<b>Comments</b>	<p>Tests scores may not be relevant</p> <p>Test scores and diagnosis may not relate to classroom performance</p> <p>Test scores do not contribute to the development of functional goals</p>	<p>Consideration of student-task-environment</p> <p>Direct relationship to performance expectations</p>

# Guiding questions for the PT

- What are (is) the student's outcomes?
  - What do you want the student to do?
    - The student's outcome is measured as a result of the environment where the activity occurs
- Can the student do the task without AT?
- Would AT allow the student to do that particular task or participate in that particular routine?
- Is AT currently used to do the task and if so is it working?

# Activities

- Sitting with peers at cafeteria table, supported at trunk, hips, feet
- Standing while clothing is adjusted in school restroom - upright with both hands held, for 5 minutes
- Walking in school hallway with use of walker or manual assist (without using wheelchair)

# Participation

- In school situations
  - Lunchtime activity among peers
  - Use boy's bathroom in Johnny Appleseed Elementary
  - Age-appropriate art activities in school classroom
  - Play on playground and interact with peers in neighborhood
- Long-term; for life situations
  - Go with family in restaurant to celebrate an occasion
  - Participate in shopping
  - Walk in park to spend time with friends
- Participation Restriction
  - Problem with involvement in life situation

## Key Point



- PTs use Evidenced Based Practices to determine whether addressing changes in the student or changes in the environment (or both) are more likely to be effective and lead to positive outcomes

# PT Intervention strategies

- Selecting and fitting adaptive equipment
- Monitoring adaptive equipment use/data collection
- Monitoring environmental adaptations
- Setting up practice sessions using devices
- Training in the proper use of adaptive equipment and assistive technology
- Identify sources of obtaining, maintaining, repairing and financing

# Research Tells Us...

- Practice, Practice, Practice
- Activity, Activity, Activity
- Focus on specific target goal needed by the learner for priority life activities
- Meaningful activity participation provides specific motor skill practice opportunity
- Contextualized(referenced to the environment) learning for carry-over of skill
- Modifications to **environment** to make a task possible, reduce support as ability improves, to further challenge and progress skill



# PT, AT & IEP Documentation



# Present Levels of Performance

- The use of Assistive Technology is written into the present levels of performance

# Supplementary Aids and Services

- 5 areas on the IEP
  - Instructional Supports
  - Supports for School Personnel
  - Physical/Environmental Supports
  - Social-Behavioral Supports
  - Program Modifications

# What is a supplementary aid?

- “...means aids, services, and other supports that are provided in regular education classes and other education-related settings and extracurricular and non academic setting to enable children with disabilities to be educated with nondisabled children to the maximum extent possible...”

# Supplementary Aids Worksheet

- Do I need to modify the physical environment?
- Do I need to promote inclusion during transition?
- Do I need to promote posture/positioning for access to curriculum?
- Do I need to promote inclusion in self-help skills/personal hygiene?
- Do I need to support the physical management of classroom or other instructional materials such as a cafeteria tray?
- Do I need to support this student's health?
- Do I need to support the continued acquisition of motor skills for greater independence?
- Do I need to support social interactions with peers?
- Do I need to support classroom staff or other school personnel in the safe physical handling of this student with training or other type of instruction?

# Goals & Objectives

- Adaptive equipment can be used as a condition of the goal
  - “While using a gait trainer, Joey will walk from the entrance of the school to his classroom and greet the teacher using his aug. com. device.”

# Some examples

Adaptive seating



Adaptive seating



# Adaptive Toilet

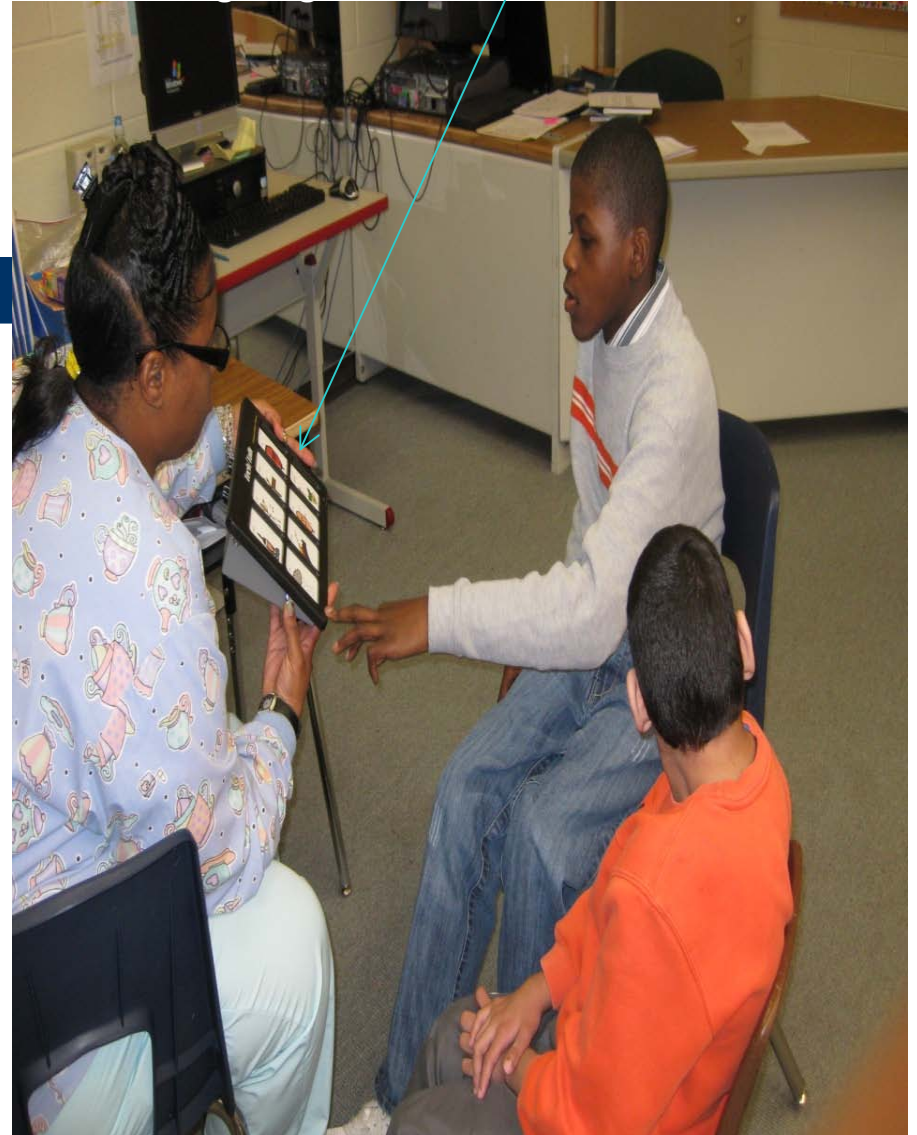






**Support station**

## Using a voice output device (VOD)





Easy Stander



## Solo lift and gait trainer





**Gait trainer**





Gait trainer



Walker, bench to facilitate transitions

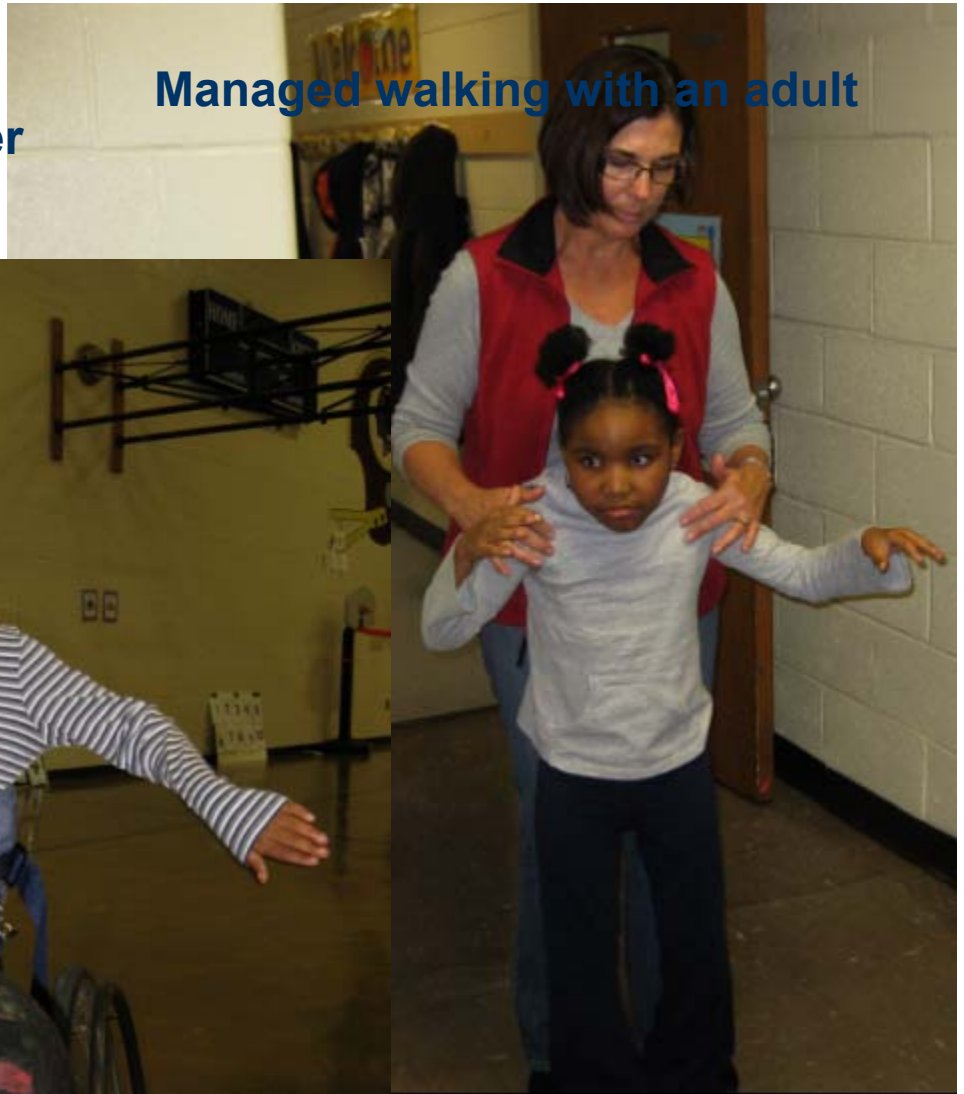


Walker with therapy bench





**Mobile Prone Stander**



**Managed walking with an adult**





# FAQs

- Can you take a device home?
  - Yes, but you must complete a loaner form and return to school in working order. The form can be acquired from OT/PT
- What if a device breaks?
  - Please alert the school team immediately. If the device is owned by PGCPS we will do our best to get it repaired in a timely fashion.
- What about personally owned devices? What if that breaks?
  - Please provide your OT and/or PT with the name of your vendor. Often the vendor can come to school to make the repair.
  - Ultimately that device is the parent's responsibility. If the student needs the device to function independently at school please make every effort to have it repaired as quickly as possible.
- Who owns the device if PGCPS buys it for a specific student? PGCPS

# References

- APTA, Section on Pediatrics “Assistive Technology and the Individualized Education Program” fact sheet. Downloaded from [www.pediatricpt.org](http://www.pediatricpt.org)
- Jackson L. (2005) What the new IDEA means to OT/PT. Power point presentation to the Maryland State Steering Committee for Occupational Physical School-based Programs, Practice Committee on 8/25/05
- Long T. (2009) Power point presentation on assessment. Section on Pediatrics, APTA IDEA 2004 conference. Denver, CO.
- McEwen I. (2009) *Providing Physical Therapy Services Under Parts B & C IDEA 2nd Edition*. Section on Pediatrics, APTA. 49-64, 99-104
- Thomson G. (2005) *Children with Severe Disabilities and the MOVE Curriculum Foundations of a Task-Oriented Therapy Approach*. Chester NY: East River Press..