

The Role of Occupational Therapy for Patients with UCMD/BM

Timothy Estilow OTR/L
Children's Hospital of Philadelphia
estilow@email.chop.edu
(215) 590-7655

Role of Occupational Therapy

Maximize the child's independence in

- Activities of daily living (ADL's),
- Work/Productive Activities
- Leisure Interests

Functional Assessment

- Self-Care
 - Grooming
 - Oral Hygiene
 - Bathing
 - Toileting
 - Dressing
 - Feeding
- Functional Communication
 - Writing
 - Typing
 - Using Telephone
 - Text Message
- Mobility
 - Bed Mobility
 - Transfers
 - Functional Ambulation
 - Community Mobility
- Play/Leisure
 - Exploration
 - Participation (sled hockey, adapted sports, etc)
- Work/Productive Activities
 - Household Maintenance
 - Care of others
 - Education
 - Vocational Activities
- **Environmental Context**
 - **Physical**
 - **Accessibility and Availability**
 - **Social**
 - **Expectations/Support System**
 - **Cultural**
 - **Customs, beliefs, norms**

Finding Solutions and Setting the Bar High

- The problems our children are faced with are due to limitations
- **NOT ONLY THERE'S, BUT OURS!**
- We need to learn more, work around barriers, think outside of the box to provide solutions
- But most of all have expectations, big ones
 - You can't meet a goal you don't set
 - Our kids need us to believe to lead the way
 - We need to set the bar high!

Where do we start?

- Assessment
 - **PRIMARY FOCUS IS ON FUNCTION!**
 - Satisfaction with level of Independence
 - Identify patient/caregiver priorities
 - Identify and Assess components
 - Physical
 - Cognitive
 - Psychosocial
 - Environmental
- Identify child's strengths as well as limitations that contribute to their performance in these areas

What's next?

- Treatment Plan
 - Choose Frame of Reference
 - Provide patient/caregiver education
 - Establish a Home Exercise Plan
 - Therapeutic Activities
 - Evaluation of Adaptive Equipment/Assistive Devices
 - Monitor progress with Standardized Testing and patient/caregiver feedback

Where do we focus?

- Primary focus is on function, form will come later

- Use a combination of all 3 methods
 - Biomechanical
 - Maintaining joint integrity and positioning
 - Rehabilitative
 - Activities and/or exercises to restore or improve performance components
 - Adaptive
 - Use of assistive devices and environmental modifications to improve independence

Assistive Technology

- CHOP's A.T. Clinic

- E.C.U.

- Switches

- Scanning Software

What therapeutic activities can our kids do?

- Community Recreation
 - Tee Ball
 - Soccer
 - Basketball
 - Dance
 - Little Gym
 - Biking
 - Horseback Riding
 - Sled Hockey
 - Etc.
- Motomed
- Aquatics
- Wii

Adapting Activities

- Modifying the task or objects used within the task to support the child's skills and abilities
 - Tee Ball – Wiffle ball bat and plastic ball
 - Hockey – Stick can be secured to w/c
 - Soccer – use beach ball instead of soccer ball
 - Basketball – height adjustable rims or nerf ball
 - Volleyball – using balloons or beach ball

- * Can also provide bracing and splinting to assist with positioning patient to maximize function

Home Exercise Programs: MOTOMed

- What?
 - U/LE Ergometer
- Why MOTOMed?
 - Appropriate for patients with significant weakness
 - Extremely Smooth motion
 - Sensored system provides assistance as needed
 - Provides exercise info.
- Benefits
 - Cardio Vascular Exercise
 - Improve/Maintain AROM
 - Prevent Contractures
 - Improve mental well being
 - Weight Management



Why is aquatics good for our kids?

- Low impact on joints
- Reduced gravity environment for ease of movement
- Provides resistive work
- Great for breath support, postural control, and joint stability
- Fun and different from other typical therapy interventions

Benefits of Aquatics: Core Strengthening

- Water is able to provide both assistance and resistance to movement as needed
- Endless positions for postural work
 - Ease of control for therapist/parent with transitional movement
 - Quick and easy up/downgrades for patient
- Able to do Static and dynamic movement
- These exercises help with maintaining postural control during school, mealtime, play, etc.

Benefits of Aquatics: Proximal Strengthening

- Improving range of motion for reach
- Increasing endurance for sustained ax and maintaining arm in space
- Improving strength for ADL and leisure ax
- Water is movement friendly for individuals with weakness
- Good environment for passive stretching with better patient tolerance

Traevon Range

Traevon Range in Pool standing MOV

Traevon Abduction

Traevon Abduction MOV

Traevon Bicycle

Traevon Bicycle MOV

Traevon Wheelbarrow

Traevon Wheelbarrow Pool MOV

Traevon Swims in Supine



Traevon Swims in Prone



Want more Aquatics

- View DVD during break

Alex Link

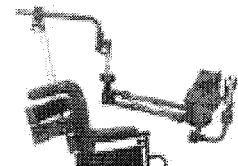
- Alex Swimming
Product Website
www.pfd-a.com/
Remember function first then form
Setting the bar high
first in his class
writing awards
YOU TUBE CELEBRITY

Moving on Land

- Use of WREX to assist with ax.
 - Eating
 - Writing
 - Typing
 - Games
 - Etc.
- Wii

MOBILE Arm Support

- What
 - A device that provides upper extremity support to allow the arm to move in a gravity free or gravity reduced environment
- How
 - Uses rubber bands to provide dynamic tension in multiple plains of movement.
- Where
 - Can be mounted to a wheelchair or table
- Why
 - to increase independence in self care and leisure tasks
- Who
 - Patients with proximal weakness and fair to good distal movement
 - SMA
 - DMD
 - SCI/Transverse Myelitis
 - CVA
 - Etc.
- When
 - Whenever
 - Can be used as part of rehab process, or as adaptive equipment for long term use



Gillian WREX Trial



Wii

- THIS IS NOT THE END ALL AND BE ALL OF EXERCISE FOR OUR KIDS!
- Kids need to be outside playing, moving, and interacting with their peers
- However, the Wii has it's value

Wee Fit Balance Board

100_0955.mov

Wii Balance Board II

100_0972.mov

Wii Tennis

100_0959.mov

Wii Boxing

100_0903.mov

Summary

- Focus on function
- Prioritize
- Think outside the box
- Set Goals
- Re-assess and start over again

Thank You!