Now You Can.®

Role of Occupational Therapy in Pediatrics

Erin Reier, OTD, OTR/L, CBIS
Pediatric Program Leader
Michelle Wiggins, OTD OTR/L, CBIS, ATP

MADONNA

Occupational Therapy Definition

"In its simplest terms, occupational therapists and occupational therapy assistants help people of all ages participate in the things they want and need to do through the therapeutic use of everyday activities (occupations). Unlike other professions, occupational therapy helps people function in all of their environments (e.g., home, work, school, community) and addresses the physical, psychological, and cognitive aspects of their well-being through engagement in occupation." (AOTA, December 6, 2017).

Key Points:

- Occupational therapists use activity analysis to break down the occupation to it's most basic components in order to teach the client how best to function.
- Occupations are activities that "occupy" a person's time
- The occupations of childhood relate to development, school, play skills, accessing the environment and processing sensory information

Specialized Training

- In regards to pediatrics, occupational therapists are specifically trained in the areas of sensory integration, fine motor control and visual skills.
- These skills are crucial in child development and cross over many environments such as play, home and school.

School Based Model

- Schools function under IDEA (Individuals with Disabilities Education Act) part B and C for occupational therapy.
- Children enter care after the student scores 2 standard deviations below normal on testing, or 1 standard deviation below normal in 2 areas.
- LPS uses a family coaching model for early-intervention.
- Primary Provider- This model uses one professional to make sure the family receives consistent comprehensive information and support. They may bring in other professionals as needed. This model is based from research that the more people involved in a family's life, the less helpful it is.
- "Family coaching model" instead of providing direct intervention, occupational therapy in the schools seek to influence families and classroom personnel to support the child's specific needs in their natural environment.

Medical Model

- The Medical Model of therapy is based on medical necessity. The child enters therapy through a prescription from a physician or nurse practitioner.
- The therapist provides direct intervention and training with the family. Each therapist (speech, occupational and physical) is responsible for an individualized plan of care.
- Therapy continues as long as the clinician can demonstrate: medical necessity, skilled need, and significant progress.
- Episodic care: a period of focused therapy targeting the child's need(s). The therapist and family will collaborate to find the goals that are achievable and meaningful for the family. There is a beginning and an end to therapy, and the therapist will give the family ideas for when to return.
  - This is a standard of care used across the country
  - Each child achieves milestones or goals at different rates and some kids require more practice between each skill learned. An episode of care is a period time when the child and family are ready to learn new skills.
  - The goal as therapists is to empower the family to find ways to participate in all environments. This includes clubs, sports, and activities with friends and families. Learning needs to happen in all environments, not just therapy, to help the child and family grow and be ready for the next episode of care.

Typical Diagnoses

- Nebraska Medicaid and most insurance plans do not cover therapy for developmental delay, PDD-NOS,
- Most insurance companies will provide a visit limit or require medical necessity.
- Most differentiate between a medical diagnosis and psychological diagnosis. Psychological diagnoses are often not covered.
- Typical psychological diagnosis: ADHD, oppositional defiant disorder, sensory processing, conduct disorder
- Maternal substance abuse is not a reliable diagnosis
- Autism Spectrum Disorder is considered a medical diagnosis in Nebraska after recent legislature.
- Prematurity is now a covered diagnosis, especially if a brain bleed occurred due to prematurity. The more specific the diagnosis, the more likely we are to get coverage for outpatient therapies.
- Genetic abnormalities are typically covered
- Cardiac and Pulmonary diseases are typically covered if these diseases are causing a delay in function.

Treatment Areas: Motor Skills

Now You Can®

- In early development, occupational therapy and physical therapy overlap in training and expertise. When both professionals are involved, a clear treatment plan and separate goals will be developed to maximize the child's potential.

- Muscle tone impacts the child's ability to develop milestones. Both high tone and low tone can impact motor development.
- Acquisition of developmental milestones and motor coordination

- Spasticity- muscles are continuously contracted as a result of an injury to the brain or spinal cord.

- Occupational therapy uses a variety of treatment approaches and frames of reference to impact, normalize or provide optimal function with muscle abnormalities.

MADONNA

Fine Motor Skills

- Fine Motor Skills are skills related to the hand.
- Timing, strength, and coordination play into a child's fine motor skills.
- Occupational therapist will work with the child to teach or adapt grasp patterns and coordination tasks.
- Play skills associated with fine motor: puzzles, shape sorters, container play, coloring, stringing beads, playing with blocks
- Handwriting
- Self-Care (buttons, zippers, self-feeding)
- Adaptive equipment and teaching adaptive strategies for handwriting, self care and leisure.

Vision

- Cortical Visual Impairment- a decreased visual response due to a neurological problem impacting the visual areas of the brain.
- Ocular motility- eye movements impacting coordination, reading, and vision. Therapist will treat these areas under a physician but specific modalities need the prescription of an optometrist (prisms, patches).
- Visual perception- the ability to interpret visual stimuli. This is a common issue that often goes hand and hand with fine motor coordination tasks (handwriting, shoe tying etc)
- Low vision accommodations- accessing the child's environment and adapting learning strategies.

Sensory Processing Deficits

- Sensory Integration- Originated from the work of A. Jean Ayres, an occupational therapist and educational psychologist.
- Sensory Integration refers both to the clinical frame of reference and as it is defined as a way of neural organization of sensory information for functional behavior.
- A person can be under-responsive and over-responsive to sensory input. The same child can also have a mixed presentation of under and over responsiveness across various sensations.
- A hallmark of sensory integration dysfunction is the variability
- Occupational Therapists strive to help the child achieve *sensory modulation,* in which the child can generate responses that are appropriately graded to the incoming sensory stimuli.
- Typical diagnoses/patients associated with sensory processing disorder: autism, children with a history of prematurity, children with a social history of neglect or abuse (i.e. children in foster care, overseas adoptions), exposure to drugs, developmental disabilities and cerebral palsy, mild and traumatic brain injury

Strategies for treating sensory integration dysfunction

- Systematic desensitization- finding the level in which the child is calm and tolerating the sensation and slowly increase the demand while watching stress cues.

- Alert Program- Designed by occupational therapists Williams and Shellenberger to promote self regulation
  - Relates arousal to a car engine
  - Educates family and child on arousal levels and sensory strategies to impact arousal

- Zones of Regulation- a curriculum designed to foster self-regulation and emotional control developed by Leah M. Kuypers, MA Ed. OTR/L
  - Discusses states of arousal in 4 color coded zones.
  - Educates the child and family to label the various zones and help recognize signs of each zone.
  - Creates an individualized “tool box” of strategies to promote optimal level of arousal.

Feeding

Occupational therapist and Speech therapist both treat feeding deficits in infants, children and adults.

Occupational therapy and Speech therapist do not typically have a strong knowledge base coming from their programs. Education in feeding often comes from fieldwork, continuing education, work experience.

Role delineation between speech and occupational therapy may differ site to site and be based on the individual clinician.

Occupational therapist can treat all areas of feeding and swallowing from self feeding, oral dysphagia and pharyngeal dysphagia.

Feeding and Swallowing

- Many children with feeding disorders have sensory, motor and behavioral components that are impacting eating.

- Occupational therapist address all of these areas by partnering with families to create mealtime routines, find the safest and least restrictive diet, and create a positive relationship with food.

Self Care Skills

- Occupational therapy can assess if the child is meeting self care milestones (i.e. dressing, toileting, bathing, self-feeding).
- OT's assess the performance components that are impacting self care (vision, coordination, mobility)
- Train on adaptive equipment to increase independence.

Executive Functions

- Attention, planning and organization required to complete a task.
- A child needs executive functions in play, school, leisure and around the home.
- Occupational therapy can work with families to provide structure and routines to increase success as well as strategies to manage dysfunction.

Home and Community Access

- Occupational therapists can complete home evaluations or equipment evaluations to assess need for medical equipment (i.e. medical beds, shower chairs, toileting chairs, feeding chairs, special needs car seats)

- Medical equipment is typically covered by private insurance and Medicaid with a letter providing medical need. The occupational therapist can write the letter of medical necessity and may request for a doctor's signature on the letter of medical necessity.

Assistive Technology

- Occupational therapists can also specialize in assistive technology to increase participation in occupations.
- Adaptive means to using the phone, computer, or communication device
- Adaptive means for play (use of switch toys or toys with a technology component)
- Adaptations for vision deficits.

Seating and Positioning

- Both occupational and physical therapists can complete wheelchair seating and mobility evaluations. A letter of medical necessity (or MS-79 form for Nebraska Medicaid) is completed by the therapist and requires a doctor signature for recommended equipment.

- Occupational therapists can also help train patients to use specific forms of mobility such as a manual wheelchair or a powered wheelchair.

Splinting and Casting

Occupational therapist are trained in the fabrication and fit of upper extremity orthotics to place the hand and arm in the most functional position.

Serial casting and splinting are used to manage tone and progressively stretch tight muscles to prevent joint damage.

Resources

- Occupational Therapy: Improving Function While Controlling Costs. (n.d.). Retrieved December 06, 2017, from https://www.aota.org/About-Occupational-Therapy/Professionals.aspx
- Williams , M. and Shellenberger, S. (1994). *How Does Your Engine Run? A Leader's Guide to the Alert Program for Self-Regulation.* Albuquerque, NM: Therapy Works.
- Kuypers, L. M., & Winner, M. G. (2011). *The zones of regulation: a curriculum designed to foster self-regulation and emotional control*. Santa Clara, CA: Think Social Publishing,Inc.
- Parham, L. D., & Mailloux, Z. (2001). Sensory Integration Chapter 12. In *Occupational Therapy for Children* (4th ed.). St Louis, MO: Mosby
- *Primary Provider as COACH Service Delivery Model for Families and Community Partners* [Pamphlet]. (n.d.). Lincoln, NE: Lincoln Board of Education.
- American Occupational Therapy Association. (2007). Feeding, eating, and swallowing knowledge & skills paper. Retrieved 4/21/2011 from www.aota.org